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Notes

from the

Lectures of

P. S. Physick M. D.

Professor of Surgery

in the University

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illed with Limestones & Sandstones & Shales &
with Coal in various Laminæ & Beds &c. —

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† This decision adopted by Hunter

Pain be attributed to a spasm of the vessels

tum Sutton to enlarged diameter of

vessels, to deposition of serum coagulable

by nerve in their interstices: heat Lvedup

to increased rapidity of circulation

but in what way not known

Pain different in different parts

Of Inflammation

The term inflammation is derived from the Latin word inflammo to burn, the Ancients supposed it to originate from an accumulation of fire in the part affected; the simple state of inflammation is not necessarily a disease, because disease generally tends to the destruction of parts, whereas inflammation is not unfrequently a restorative, agent to them when injured. Inflammation is divided into healthy and diseased. Health inflammation always commences with a preternatural sensibility of the part affected, slight impressions producing soreness; if seated in the skin there is an itching, redness, increase of heat and throbing pain; the function of the part is performed with difficulty and sometimes entirely destroyed, as when inflammation occurs in the eye. The remote causes are three viz. Chemical, Mechanical and Fever. The first are, heat, cold, acrids,

Exercise 1ecu. The second are all such as tear, stretch, bruise, rub, or divide any part.

when in cellular membrane or muscle little pain experienced - when it is seated under the Pericostium with tendons or it is more excruciating.

Inflammation does not always occur immediately after the application of the remote cause; there may be an interval of twelve or twenty four hours and sometimes of forty eight hours between the existence of the remote cause and the appearance of inflammation. The same remote cause generally produces inflammation of the same kind, but Sometimes what produces Erisypelas in one will produce Phlegmon in another, and this owing to the different State of the particular part, peculiar Idiosyncracy - Dr Smith ascribes the different Species of Inflammation to the difference of parts viz; the Suppurative to the cellular membrane, the Rheumatic to the muscles &c; but were this true, after amputation of a limb, we should have Erisypelatous in the Skin and the Suppuration affecting only the cellular membrane, which we know is not the fact, as one and the same inflammation pervades the whole Stump - Fever is sometimes the cause of inflammation as in critical abcess - The effect of the remote causes are varied by constitution. A Similar wound in three persons will terminate differently; in one it may heal by the first intention, in the Second by adhesive inflammation, and in the third by

Suppurative, The are also varied by habit, for labour
does not produce inflammation on the hands of the labourer
The effect of heat may also vary by habit. There are three sta
ges of Inflammation; The adhesive, Suppurative and
Ulcerative so called because an ulcer is the effect. The
adhesive inflammation originates in the small vessels,
and the swelling is induced by an enlargement of the
vessels, and the effusion of Serum and coagulable lymph;
it is always attended with pain ascribed by Mr Hunter
to a spasmotic affection of the vessels; The matter secreted
in adhesive inflammation is coagulable lymph, a
part of which after a while becomes vascular, while the
remainder is conveyed off by absorption; it appears to
undergo a change from adhearing to the sides of the wound
The consequences of inflammation are varied according
to the part affected, the constitution and violence of the
when it is seated in the skin its effects are more moderate
than when more deeply seated - I was once called to see a
a man about 34 years of age who was supposed to be dying
of a wound in the leg; when I saw him he was much con=

pulse, and had such a tremor that he could scarcely
articulate a word, his pulse was weak with cold clammy
extremeties, this man was cured by laudanum taken
internally and by applying bread and milk poultice with
liquid Laudanum to the part— The next mode of termina-
tion is by a large suppuration of serum, as from a blister; sometimes
hemorrhagy from the inflamed part puts a termination to it,
as from a small artery in the eye when that organ is inflamed;
if inflammation does not terminate by either of these means
it ends in suppuration— In general resolution is most
desirable, except in very warm weather when Tetanus is
feared— It has been laid down as a general rule never to attempt
resolution when the inflammation is critical— But it is not
at advisable when it is seated in important parts, as the eye—
Treatment— The first indication of cure is to remove
the remote cause as soon as possible, if they act; the second
indication is to remove the morbid action of the part by blood-
letting, purging and low diet; the quantity of blood drawn
should be regulated by the strength of the constitution, the
violence of the inflammation and the nature of the part
affected— Bloodletting is useful in two ways, 1st it removes
the stimulus of distention by lessening the impetus of the blood

The position of the part should be attended to in Tetanus, where we are prevented from drawing blood —

o Poultices keep the cutis soft and pliable and produce perspiration: they should be soft and not too thick, else they will be injurious and painful by their weight —

as the blood-vessels wile contract to the quantity of blood in them, and as contraction is a different action from that in inflammation, the parts are permitted to take on a healthy action, in consequence of being deprived of an inflammatory one. Purging acts also by emptying the blood-vessels, it is however generally inconvinient in Fractures; here we should trust to blood letting. The next remedies are Neutral Salts, such as Nitre, Sulpher Sodæ &c. Antimonial Medicines so as to induce nausea. Diluent such as tepid drinks, Mercury, and lastly rest with a proper position of the part, which should always favour the flow of blood from the part affected. The local remedies are 1st Topical bleeding 2 cold applications, which are to be discontinued as soon as the sensation of heat is removed, 3 Preperations of lead, Spirits of wine Laudanum and vinegar, 4th Poultices such as bread and milk or mucilage with Laud: sach: Lat: Vinegar &c. Blisters above all other applications are useful in discussing inflammation, and possessing this effect without much previous depletion, blisters are particularly useful in the treatment of wounds in warm weather when much bleeding is prohibited.

Suppurative Inflammation

Takes place when the adhesive has been too distentor when

□ This doctrine has been supported with great ingenuity by Doctor Cullen and others

accident prevents the surfaces of wounds from coming in contact
with each other, when the remote cause continues to act; when
suppuration is about to commence there is an increase pain, re-
ness & heat; after the formation of pus the tumor becomes soft and a fluct
uation is perceived, the inflammation now moderates tho the parts con-
tinue sore, suppuration is followed by rigors, fever & sweat, but if the
constitution be weak and deglutition approaching, there is no fever
but a clammy sweat precedes the discharge of matter and relieves
the Symtoms - Hectic fever is distinguished by a small, quick and fre-
quent pulse, attended with loathing of food or excessive appetite; nau-
sea, costiveness or Diarrhœa, it sometimes assumes the form of an In-
termittent which abates after profuse suppuration, there is a great
tendency to sweat, the Urine high coloured and deposits a Sediment.
this has been ascribed to an absorption of matter; I object to such theory
for the following reasons - 1st suppuration in a vital part will produce
Hectic which is not the case in other parts - 2d there are cases when an absor-
tion of pus is evident, as in buboes, and no consequent Hectic - 3d Issues
will cure Pulmonary consumption, whereas they would increase it, if de-
pended on absorption; the affections of the joints have been cured in the same
way 4th Amputation will cure Hectic in diseases of the joints, and the
suppuration is always greater than before the operation.

In the Treatment of Suppuration much pain is relieved by
opium, with a small quantity of Tart Antim, so as to produce deoptions

□ By opening abscesses on the face all deformity is avoided in a great measure —

The best topical application is a common bread and milk poultice—
Nature in most cases will effect an opening for the discharge of
pus, but when this process is slow recourse must be had to the lancet
or Knife—After the discharge of matter the abcess heals very readily
it is common to apply Stimulating applications with a view of
drawing, as it is called, but I not think they have any good effect—
When the suppuration is seated over important parts, as the sides
of the Thorax, Abdomen, Cranium, over joints, as the hip Knee &c.,
a puncture should be made soon after the formation of the pus,
which should be avacuated—Sometimes there is very considerable
pain in the abcess, this may be relieved by an incision into the sac
containing the matter, so as to avacuate it. An abcess in the knee
has produced a pain in the head, which resisted all internal
remedies, but was relieved by evacuating the matter—I have known
a pain in the back cured in the same way—Two cases of Typhus have came under
my notice, which were occasioned by an abcess in the external oblique
muscle, both were cured in the same manner—Abcesses on the face
should be opened as soon as possible, and likewise when so situated
as to impede respiration—There are two ways of opening abcesses,
one by incision, the other by caustic. The first is preferable, but
in timid persons we are obliged to have recure to the latter—
When these caustic some of the lapis caustic rubbed on the
thinnest part of the skin for ten or twelve minutes will cause an

opening into the abcess in from 24 to 48 hours — Sometime the
matter formed is absorbed and the process of suppuration stopped
in some cases this es desirable, and has been the effect of bometimy
or the application of a blister in venerial buboes — When suppuration
takes place in the eye we are to rely on bleeding, blistering and
purging, and of all blisters are the most useful —

Of Pus

Pus a healthy state pus is of the consistancy of cream of a pecu-
liar smell and straw colour — globules may be seen with a
Microscope; it does not readily putrify nor coagulate when
exposed to gentle heat, but evaporates to dryness; it does not
readily unite with water except it be agitated; it is not corro-
sive but now and then the skin is destroyed by it — Pus differs from
all the other animal fluids, from blood by its globules being of a dif-
ferent colour and coagulating with muriate of Amonia, the time
necessary for its formation differs, sometimes it forms in 24 hours
after the application of blisters; it sometimes forms in 5 hours as
when a bougie is introduced into the Uretra — Pus is evidently a se-
creted fluid poured out by the inflammable vessels which assum
the nature of a gland —

Of Ulcerative Inflammation —

In this the parts diseased become entirely destroyed and

conveyed away by the absorbents, which may be owing to the pressure of the pus on the sides of the abcess - The Ulcerative generaly follows the Suppurative Inflammation, but it Sometimes proceeds as it as Shankes, simple pressure of the pus may produce an Ulcer; this is always attended with adhesive Inflammation, which prevents the effusion of pus into the cellular Membrane, the pain attendant on Ulcerative is generally called Soreness, but when the process is slow, this soreness is never present - Besides these there are other Species of Inflammation to be Spoken of -

Of Erysipelatous Inflammation

Erysipelas is generaly preceded by a shivering fit and follows by fever, it is Seated in the Cutis vera, and is of a bright red, dusky or yellow colour, which may be removed by the application of pressure; it Sometimes extends over the whole body successively. The pain is not acute but of the burning Kind, in the face the disease comes on with much itching. The Suppuration is much less than in adhesive inflammation; when it is about to disappear it ceases abruptly; the serum occasions vesications - The Erysipelas differs from the Adhesive inflammation by its secreting serum instead of Coagulable lymph - Sometimes Suppuration takes place and the pus leaves into differents parts of the body by means of the Cellular Membrane, which is apt to become gangrenous - This Kind of Inflammation is most likely to take place in the buttox and face, it comes on suddenly with

The tumor in Erysipelas does not thrust &c - sloughing
occurs most frequently about the buttock Lower-

I thought that this practice of blistering originated
here, but I find that Ambroise Paré was the
author of it. who applied them with the
same view that we do. viz. to change the
action of the Part

a universal bright red or yellow colour, attended with heat a sensation
of ~~he~~ tickling and distressing itching. When it takes place in the face
the eyelids are so effected as to obstruct vision, the skin is of a
pellucid appearance, small pimples appear, containing a transparent
fluid which exudes and excoriates the surrounding parts, these pim=
ples produce Ulceration which tends rapidly to gangrene. There is no
certain period for the appearance of this disease, it generaly continues
10 or 12 days, when, desquamation takes place and the Cuticle seperate
The remote causes are the same as excite other Species of Inflammation,
but it is sometimes Spontaneous. The general treatment likewise
the same. In England bark is much used for this disease.
Before the occurrence of Suppuration or mortification I have
generaly found evacuants useful. Unguents or poultices
are highly inadmissable. The application to the part, should
be flour or starch, sprinkled over it. Of late I have found the
happiest effects resulting from the application of a blister to the
part. Bathing the part affected with a mixture composed of 1 ℥ of
Laudanum and ℥iij water is sometimes an excellent application.
When Suppuration takes place the parts should be freely open
immediately, because the pus travels extensively thro' the cellular
membrane producing gangrene and great damage to the
cellular texture. Another Species of Inflammation is

Oedematous

The Oedematous Inflammation is supposed to be situated in the skin; but I think it is deeper; it arrises from an extravasation of water in the Cellular texture; probably the inflammation is similar to the adhesive only tending to dropsy; it appears in dropsical limbs, it is sometimes produced by scarification; the pain is of a burning kind. The remedies are bleeding, purging, the external application of Brandy or other Spirits, and in some cases a poultice of bread & milk has been useful when the inflammation was great.

Mortification

Mortification is the complete death of a part, Gangrene is the incipient stage, the state of the System determins the mode cases. There are two kinds of mortification, one without inflammation the other preceded by it. The first is produced by such mechanical violence as destroys the life of the part, by obstructing the circulation and by intense heat or cold; the Symptoms are a destruction of heat and sensibility and change of colour from red to purple, then to a livid and lastly to a black smelling an offensive smell. The cutis seperates making vesications containing a bloody serum. Remedies, when the part mortified is small the only application is a bread and milk poultice until the dead part

seperates; When Inflammation attends, evacuants are to be used according to the State of the Constitution, a moderate degree of inflammation however is always necessary; opium should be given to relieve pain, Bark and Wine with nourishing diet to support the patients strength: When mortification is induced by exposure to cold, there is much redness inclined to purple. The Sudden application of heat in these cases, causes instant death; in order to prevent this the patient should be gradually warmed, first by the application of snow, next Spring water and so on gradually increasing the temperature. Mortification sometimes occurs without any apparent cause, as takes place in the extremities in Yellow-fever. Of the Secondary kind there are two Species, That which occurs from excessive inflammation, & that which arises from some peculiarity in the Nature of the inflammation. The remote causes of the first are such as induce excessive inflammation, the previous State of the System varies the effects, thus an application on a sound person producing only inflammation will on a diseased one produce Mortification. I knew a Surgeon who by a mistake injected the cellular Membrane of the Scrotum instead of the Tunica Vaginalis Testis, for the cure of Hydrocele. He was attended with inflammation, Swelling, fever, delirium, Mortification, Emphysema, & Sloughing of the parts, from wch

have the same effect – There is a peculiar mortification of the toes to which old people are subject; it commences with pain inflammation of a dusky red colour succeeded by a dark brown spots and vesications, the process is sometimes slow, at others rapid, some patients experience great pain, others none – I once saw a mortification of the whole foot excited by the scratch of a pin; Dr Pott says that Opium is the best internal remidy, and a bread and milk poultice to the whole part affected; he objects to stimulating applications and to scarifications; the parts will seperate of themselves – Amputation has been practised, but this means should not be adopted if possible to avoid it, as it is generally succeeded by a mortification of the stump. Long continued pressure will produce mortification, as is observed in the sides and hips of persons long confined to bed; the symptoms are a burning pain and change of colour from red to a livid with a subsiding of the tumefaction, and with the appearance of blisters effusing blood serum sometimes there is an empty sanatous appearance – The sensibility of the part becomes destroyed, and there is a disengagement of air from putrefactive fermentation with a very disagreeable smell – It is obvious when mortification is attended

with inflammation, that simulating remedies are improper
when applied externally they only cure when they overcome
that action which is peculiar to mortification — The reme=
dies are generally and local. The are bleeding, purging
and low diet, but when there are symptoms of depression, such
remedies are to be abstained from — The pain is to be relieved
by a free use of Opium, and the Strength of the patient suppor
ted by the use of the Bark and a nourishing diet; also wine
and bitters when the stomach will bear it — It may be proper
to observe that where the patient has been in the habit of
drinking to excess, he may be indulged when there are symp
toms of debility present — The local remedies are those re=
moving all exciting causes, as acrid matter from the
cellular substance in Erysipelas — Stimulating sub=
stances as bark, sp. of Turpentine, carrot poultices are
not all very improper before the inflammation subside
unless it is to remove the foetor of putrefaction — The
fermenting poultice, made with one part of honey two
of flour and one of yeast with the addition of a small
quantity of finely powdered charcoal, set aside in a

warm place untile it ferments, and then applies is well
adapted to this purpose - A Second Species of this Kind
of ~~Multiplication~~ Multification arises from Something peculiar in the
inflammation, as in Small Pox and Carbuncle -
Carbuncle is a circumscribe, firm, broad, flat inflam
med Surface, of a dusky, red colour; the pain is of a burning
kind and pus is formed in the cellular membrane, but
of a visicated kind, the skin opens and putred sloughs
shafts out - Carbuncle most commonly occurs in old people,
and those who have lived freely, it is generaly seated on
the back, sometimes on the head and sometimes on the ex-
tremities; The commonly appear singly, but sometimes
there are more than one: life is not much endangered except
there are several, or where they are situate on the head
or extremities; much however depends on the constitu
tion - That Carbuncle depends on some peculiarity in
the inflamation Infers from a case related to me by
Dr. Westar, which was seated on the leg about the
size of a Dollar: After several remidies were used in
vain, it was at length cured by Several Radiates

incisions, circumscribed by a circular one around the
margin. By this means Gangrene was arested and the
patient finally cured. In this case the incisions produce
new kind of inflammation which counteracts the
morbid one. I have found blisters of greater efficacy
than any other remedy in all kinds of mortification.
They should be applied on the sound part around the
mortification; in carbuncles, directly over the part affected,
and effectually relieves the burning pain experienced
in this specis of mortification. Blisters do not exert their
beneficial effect when applied to a mortified part, attended
with debility, and an exhausted state of the System, for in
such cases, by increasing irritation, they must tend to
increase mortification. As a proof that the dark colour
of mortified parts arrises from an obstruction and extra-
vasation of blood, if you wash a mortified part in water
it will assume a pale colour. Another proof is, that
if you exhaust a part of its blood and secure the arte-
ries with ligatures no such colour appears. I am of
opinion that mortification is never induced by excessive

inflammation alone, but is the effect of some peculiar
dentency of that inflammation to mortification, and in
this way only can we account for the beneficial effects
of Blisters, for if mortification depended on inflamma-
tion in excess, the Blistering process would certainly
increase it, by rendering the inflammation still more
excessive- On the other hand if we suppose Blisters
relieve by exciting a new action, a ready solution is
afforded.

Abcess of the Mamma

We rarely see this species of Abcess in the forming stage
in consequence of the presumption of Nurses, who suppose
themselves adequate to the treatment tile it is to late
for the propet remidies- It appears however that in-
flammation very rarely attacks the whole Mamma, but
is confined to only a part of the gland, Cellular mem-
brane or Adipose Substance- When a part of the gland
is affected, the secretion of milk is deminished, and
if the whole gland be affected, it ceases altogether- An
acute pain extends to the axilla- When situated in the

3.8°

Cellular Membrane, the quantity of milk secreted is not much altered - Sometimes a chilly fit precedes, at others it commences with a dull pain, hardness, redness and heat; sometimes it appears like a Schirrous tumor, at others several of the glands are inflamed at the same time - Women are subject to inflamed breasts so long as the Suckle; they most frequently occur previous to the third month after their accouchment - If the inflammation be seated in the integuments, it will terminate in resolution or Suppuration - The Swelling is sometimes adematous, almost enveloping the whole Nipple - In other cases the Swelling ceases after an extravasation of coagulable Lymph, tho' the tumor still continues, which however has nothing cancerous in it, and may be discussed or else after continuing a considerable time be brought to Suppuration. The remote causes of Mamery Abcess may be mechanical, as tight dresses, exposure to cold and long retention of the Milk also induce it - Sometimes there is no evident remote cause. We see the gland, in some instances, reduced from inflammation and the Secretion of the milk never afterwards returns.

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In this disease we've scarcely ever an opportunity of prescribing
until Suppuration is established - When we have an oppor-
tunity of Seing the patient at the commencement of the disease,
the remidies are bleeding, purging and a vegetable diet,
with the application of warm oil to the breast; the patient
should continue in bed, or when Sitting up, the breast must
be properly Supported by a handkerchief passed round
the neck: if these remidies are not Sufficient, the
bleeding must be repeated and leches applied to the
breast; after these a bread and Milk poultice, with
lead water, should be applied to the part. The poultice
should always be preceded by evacuants - If resolution
be not effected by these medins, the next application
is a blister - A variety of Stimulating applications have
been recommended, all of which act as rubefacients, and
are greatly inferior to Cantharides I have known case
to be given even while the Blister was drawing, and
the patient fall a-Sleep after Spending many restless
nights Ipe never never found the Smallest benefit
from Pustamend's remidy of Sal, Ammon. dissolved in

ingab - Should the blister not produce an opening, it
must be effected by the knife or lancet - After this the only
remedy necessary is the application of a poultice of Milk and
Bread in order to promote the discharge - In the case of
edematous Swelling, which I mentioned, after bleeding,
purging, low diet &c. without any good effect, a Blister com=
pletely reduced the Swelling and effected a cure, and in the
case of Schirrus, I had the Satisfaction of seeing it produce
the Same Salutary effect, after the fever was reduced by
Venesection, purging, low diet & Antimonial powders -

Paronychia

This frequently causes much unnecessary pain and suffer=
ing - It is seated on the extremity of the finger and is to
suppurate, attended with excruciating pain - The 1
Species of it is seated in the Cutis Vera; the 2 in the
Adipose Membrane and is more superficial; the matter
appears under the Nail with Swelling, extending some=
times up the arm; 3 Species is seated between the
periosteum and bone, or in some of the tendinous
sheaths, and is attended with extreme pain - There

is no Swelling or redness in the part but on the arm; when
ed Suppurates the matter frequently extends along the
ndons of the flexor muscles of the fingers and appears
d the wrist before the annular ligament, attended
with Sloughing of the parts; Sometimes mortification
takes place in the part effected; the bones become
carious and the tendons and ligaments slough away
The remote cause of this is difficult to be ascertained -
I have seen one case produced by the bite of a Serpent -
In the two first Species an opening is to be made
into the tumor and the pus evacuated, after which
dressings with lint and poultices with bad-wales
will be all that is requisite - In the last Speci the most
effectual treatment, after singing the spot, is to make
an incision down to the bone, and afterwards dressed
with dry lint or poultice of bread and milk - If the bone
be carious it must allowed to exfoleate; should the matter
not spread and form Sinuses, they must be opened where
ever the appear - Sometimes they open naturally; in this
case they should be enlarged, if they are not sufficiently

ftenisce & to admit a free discharge, and likewise
destroy the fungus by escharotics which could not
otherwise be done—

Psoas Abcess

This is seated in the cellular membrane around the
Psoas muscles, the matter being contained in a cyst
formed in the cellular texture— Any of the remote caus-
es of inflammation may occasion it, as contusions
strains of the muscles and particular diseases— It is
frequently preceded by pains in the loins, tho sometimes
there is no pain during the whole of the disease— When
suppuration takes place, the pain becomes of dull
kind, and extends to the upper part of the thigh, &
there is difficulty in rotating it; there is also an inca-
pacity to stand erect, the patient observing a recumbent
position to avoid the pain which he experiences when erect
rigors come on and suppuration takes place, tho many
months elapse before any tumor appears— The situation
of the tumor varies in different persons, sometimes it is

° Palsy very often happens arising from curvature of the Spine and by that means pressing on the Spinal Marrow

situated above the loins, sometimes above the anus, 49
and sometimes the matter descends from the sac to the
lower part of the thigh - The integuments are never discol-
oured, nor is the tumor painful - After fluctuation
is perceptible - In an erect position the tumor is more
painful than in a recumbent one - If pressure be made
on the abdomen, the matter is perceived in the thigh
and destends the tumor - The quantity of matter contai-
ned in the sac is sometimes very great, amounting to
even two quarts - The tumor never discharges internally
into the Peritoneum, tho sometimes the large vessels
in the vicinity are eroded - All the cases I've seen
have been attended with carious spine, and very fre-
quently with Palsy of the lower extremities - It has
much resemblance to Hernia, Bubo and Fistula
in ano; and is sometimes with difficulty distinguis
hed from them in the early stage of the disease - The
indication is to prevent the formation of pus: this is
to be effected by rest, low diet, enjoining abstinence from

" These remedies are only to be used when febrile symptoms exist, which is a very rare occurrence in this disease ——

□ And thereby cause an evasion of the large blood-vessels ——

† This is one of the diseases of inflammation unaccompanied by any febrile disease —

* There should be two or three weeks intervening between each tapping the use of a probe is very dangerous

from all animal food and spiritous liquors, bloodletting, Scarification or cupping, purging and blisters applied to the part affected with pain - Should these not succeed an issue should be made on the side of the spine; but if all our remidies should fail and Suppuration with its consequent tumefaction supervene, a question may arise whether we should open it or not; some have advised opening it as soon as possible, fearing the matter might discharge into the abdomen, but, I should prefer postponing it as long as possible, from the apprehension of the gangrenous symtoms that succeed - Mr. Hunter says, that by the admission of air into the cavity, the sides become violently inflamed, and in this way produce the fever which follows - Abernethy, thought that an opening might be made in such a manner as to heal by the first intention and prevent any bad effects; the pus would again evacuate; and, after two or three evacuations the tumor would be so

diminished in size as to admit of an extensive opperation
without danger— The opening is to be made with a
lancet in the longitudinal direction of the thigh;
first by raising the lancet before the skin is per-
forated, and then cutting in an obligue direction
so that the upper surface may overlap the
under one somewhat in the manner of a valve
this is to be closed immediately after the matter
is evacuated and secured by adhesive plaster
in such away that it will heal by the first in-
tention and prevent any of the bad effects that
would results from the admission of air— Altho I have
not succeeded in curing Lumbar Abscess by this mode
of treatment, I believe my ill success was owing to a
various stale of the Spine which existed in every in-
stance in which I tried it: but in the extensive
abscess of the thigh, sinus & hip, I've experienced
the most beneficial effects from it; but unfortunately
after using every possible caution the sides

vile not unite: as in the following example—
A Gentleman came to me with a large tumor in the
pper part of the thigh, supposed to be a rupture;
he had a slight burning pain and swelling in
the right side for nine months before; the swelling
ncreased without pain, and retired and returned
s he changed his position from a recumbent to an
rect posture: upon pressing the abdomen, the
umor on the thigh was increased, also by cough-
ng any straining, but there was no degree of fever
ttending: its appearance was very similar to
hernia, from which it was distinguished only
y the fluctuation: a slight curvature of the
wo adjoining vertebræ was perceptible; the
welling still continuing to increase. I opened
t in the manner recommended by Abernethy,
nd after discharging the pus, amounting to 1
uart, I closed the orifice; in four hours I again
ressed it and evacuated a second quart, after which

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closed it with adhesive plaster; the patient made
no complaint until 12 o'clock the ensuing day, when
he was affected with weakness, fever and delerium,
which were relieved by bloodletting and purgeing—
On the third day the pulse small, tense and frequent
with a livid countenance and a sense of lassitude,
these symtoms were again relieved by the loss of
ten ounces of blood, and the application of a blister,
there was a slight tinge of inflammation on the ten-
but these symtoms returned in three hours, when
8 ounces more of blood were drawn, which again re-
lieved them: on dressing however, I perceived that
no union had taken place on the 4 day: on the 12
the symptoms of fever returned, but were relieved
by the loss of 8 oz of blood; pus began to be discharged
and a fistulous ulcer was formed, some pieces of
bone now came away which shewed the vertebræ to
be carious. Strida ipsens, but Hectic fever came on
and he died in 8 months; after death I examined

Dr Physick's questions, the answers will be found on the opposite page according to their number

1 Whom does this disease principally attack.

2 How does this disease commence

3 Is the pain very acute or not in the commencement—

4 Where is the pain felt generally—

5 Has this circumstance (pain in the knee) deluded the practitioner—

and found several carious vertebræ, and the body of one destroyed. An anchylosis had formed between the oblique processes of all the Lumbar Vertebræ, so as to support the trunk after the default occasioned by the loss of one of them. This anchylosis however, was not in consequence of the union of long surfaces, as in other cases, for the cartilages still remained between the bodies, and it may therefore be attributed to the vis Medicatrix Naturæ—

Abcess of the Hip Joint—

This sometimes occurs in old people, but more frequently in early life; it begins very obscurely with a degree of stiffness, slight pain, limping and great reluctance to walk or use the limb. As the disease advances the pain increases so as to become very distressing; the pain is not always seated in the Hip joint, but sometimes in the knee; this has often deluded parents and even Surgeons, who have made topical applications to the knee in consequence thereof; this pain in the knee is not constant but comes on in Paroxisms, which

1. What is the appearance of the buttocks —

2 Is there any difference in the length of the limbs — and what causes the difference —

may last from five to fifteen minutes, attacking the
the child while at play, or in the night, causing it
to scream violently; on examination the hip will
be found swelling, and the swelling in time will
extend to the buttocks, occasioning considerable en-
largement. Pressure on the Trochanter Major gives
pain, and the child always rests the body on the sound
leg, which raised the pelvis on that side and makes
the limb appear longer; when standing the affected
limb is bent forwards and he stands on his toes; this
gives the appearance of a curved spine, which, however
may be distinguished from the true one by placing
the patient on a table, when by proper exertions the
spine may be straightened, which cannot be effected
in the true curved spine, or in the rickets, indeed
I've known caustic to be applied under the mistake
that this was the curved spine. Sometimes there is
no evident cause, but in general it is produced by
severe blows on the Trochanter and by jumping.
As the disease progresses, the swelling and tenderness

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1 How would you prove the difference in the length of the two limbs and does it ever cause insurable lameness —

2 What does luxation of the hip arise from

3. Does luxation ever happen downwards and forwards —

increase, lameness grows worse, motion is more painful, & length the child is unable to walk, and has the "os innominatum" of the sound side considerably elevate above the other. Sometimes after this the limb becomes considerably shortened by the head of the Femur being pushed out of the Acetabulum by the tumor and then drawn up by the contraction of the muscles. By a little force the bone can be detracted and reinstated, but again ascends on the force being withdrawn - This is what some French authors have called "Spontaneous luxation: In general it is drawn upwards and backwards, but I have seen an instance in which it was drawn downwards and forwards - Suppuration takes place, in many cases, sooner or later, in the joint, and then it may be properly called an abcess of the Hip joint, the head of the femur at the same time becomes carious, but Suppuration does not always succeed, nor does dislocation continue; for a new acetabulum may be formed, and the joint restored, such might always be the case if the head of the Femur was sound - When Suppuration and caries both exist

1 How does the disease progress when it is neglected—

2 Does the disease ever end in anchylosis—

3 Is it easely managed in the early stage

more or less fever do supervene, which, when the abcess opens
externally, attends throughout the complaint: the matter
may form many openings, when pain becomes more exqui-
site on motion; Hectic, Emaciation, Night-Sweats, loss of
appetite and exhaustion succeed, which speedily termina
the life of the patient. I should have observed that
the muscles of that thigh are very much wasted and
the limb deminished in size. In some cases there is no
shortning of the limb; altho' both acetabulum and
Femur should have become carious; for granulations
may take place and both unite by Anchylosis; in
other cases, both the acetabulum and head of the
Femur are absorbed with a portion of the Pelvis, so as to
admit of the introduction of a probe into the bottom of the
cavity - Unfortunately Physicians are never called in
time to Patients laboring under this disease; I say
unfortunately, because, I believe it, be very much under
the power of medicine in its forming state - I shall not
here detail the various remidies recommended by authors
but only inform you of that practice, which I myself

BB

1 What is the treatment in the incipient stage

2 What the advantage of keeping the limb at rest either by a recumbent position on the Bed or else by the application of a splint to extend from the middle of the body down to the ankle —

3 What are the other remedies besides those above mentioned —

have found most successful. If you should be so lucky
as to be called in, in the incipient stage of the disease,
I would advise, in the first place, bloodletting, and
then purge every other day for two months at least, con-
sisting of Cream tart. & Jalap, in such quantities as to
produce 4 or 5 evacuations from the bowels at each dose
you need not be afraid of debilitating your patient
too much, for by this practice, for they bear it with
little inconvenience. They should be kept perfectly at
rest in order to avoid all irritation of the joints, and live
on a vegitable diet, and after the conclusion of these rem-
edies for the time mentioned, then the warm bath once
or twice a week with a portion of common salt deposited
in it or a bath of warm brine, these last, however, Doctor
Physick does not recommend so highly as formerly; with
these remidies I've succeeded in arresting the progress
of the disease even after a considerable tumefaction
had taken place in the Hip. 3 In addition to the rem-
edies already mentioned, I would recommend a caustic
issue, previous to it, topical bleeding if inflammatory symtoms exist—

What the difference between an incised wound and a contused one—

Of Wounds

By a wound, is ment a breach of continuety in the body communicating externaly, and implies a mechanical division. Wound differs not only in their situation and part effected, but also from the nature of the instrument that produces them: accordingly they are divided into Incised and Contused. Incised wounds, are made by sharp cutting Instruments, Contused, by such as bruise the parts, under which I comprehend Lacerated, Punctured & Gun-shot wounds. An incised wound is always attended with greater hemorrhagy than a contused one. Contusion prevents Hemorrhagy; this strikingly illustrates in a case related by Cheselden in his System of Anatomy, the subject was a miller who had his arm ground off without the loss of Blood, I have also witnessed a similar case in a boy who had his arm ground off in a mile — In the case of incision no injury is done to the Vessel beyond the divided surfaces, consequently the circulation will not be stopped, unless

1 What is the first treatment in incised wounds—

clotting coagula, or contraction of the bleeding vessels should take place
In contusion, the vessels are wounded beyond their divided
surfaces, which renders them incapable of propelling
their blood; also the extravasated blood being confined
presses their sides, and the death of the part stimulates
the blood to coagulation; that this is the case we may
infer from the effects of a thrombus which occurs after
Venesection— Incised Wounds are such as are
made by sharp cutting instruments, and are attended
with much hemorrhage. Here the first thing to be at-
tended to, is, to put a stop to the Hemorrhage; as a
Tourniquet is not always at hand, it can be effected
by means of the fingers, until a Tourniquet is procured
In wound of the extremities it should always be applied
above the Elbow or Knee, for the obvious reason that
there is but one bone in these parts; a compress should
always be laid over the artery on the thigh to render the
compression more effectual. It is important to remember,
that the subclavian artery, where it passes over the first
rib, and the Inguinal artery in the groin, can be toler-
ably

my 2

1 What is next to be done —

a How would you apply a ligature —

2 Suppose the Tenaculum cannot be used what other instrument would you use

3 How would you use the Needle

4 When you cannot compress the artery how would you do

compressed with the fingers; the next thing to be done is to
clear the blood away from the part by means of a Sponge
and warm water; the arteries are then to be secured
with ligatures, by pulling them out with a Tenaculum
and tying them; the lower orifice of the divided artery should
also be secured, on account of the anastamosing branch-
es, which may exist between them and the upper ones.
In cases where the Tenaculum cannot be used, a needle
armed with a ligature may be substituted. When
the wounded artery cannot be discovered, it is proper to ap-
ply the finger to the spot where the blood issues and
then pass the curved needle above the finger, with its
concave surface towards the artery so as to enclose it.
The ligatures must be brought out at the orifice.
All Hemorrhagies on the extremities may be stopped
with the Tourniquet; but when situated on the
Trunk or very high up on the extremities, the fingers
must be used until the Vessels can be secured with
the Tenaculum or needle. Sometimes it is necessary
to dilate the wound in order to come at the artery; at

1 How would you manage when you cannot
dilate the wound —

other times the artery lies so deep or is so situated as to forbid
this — I once wounded the ~~Arteria Radialis~~ Radica interna with the Gorget in
operating for the Stone, but after ascertaining the situa-
tion of the orifice with my fingers, I passed the Tenaculum
and succeeded in pulling it out, this was the only alter-
native — Sometimes pressure can be made on the trunk
until a clot is formed so as to stop the bleeding when
dilatation is inadmissable — A Boy wounded, by accident,
an artery in the Sole of his foot, in which dilatation
would have been improper on account of the depth of
its situation and the numerous anastamoses arising thro
in this case I completely succeeded in stopping the Hem-
orrhagy by compressing the posterior and anterior arteries
It was done in the following manner, A small compres
was applied on the Anterior, and another on the posterior
Arteries, just above the ancle joint: A small hoop of
copper, with the ends overlapping, each other, was applied
over the compresses, and lastly a Tourniquet over all —
The application to the wound was a piece of lint dipt
in Spirits of Turpentine — It rarely happens that the

artery cannot be secured by some of the means already
mentioned, unless it be seated far back in the fauces,
which is sometimes occasioned by extirpating a Tumor;
in this case we must apply dry Sponge, flour and all kinds
of astringents, should all these fail, our only alternative is
the actual Cautery — When a wound in a large artery
is very small, it may heal of itself: I knew a case of a
boy who wounded the Popliteal artery, which was followed
by a considerable tumefaction and division of the part from
the middle of the thigh to the lower part of the leg; as he
suffered considerable pain, he was put to bed, and in a
short time the coagulable blood formed a plug, which com-
pletely stopped the bleeding. The tumefaction subsided
considerably during the night, but the next day it re-
turned in consequence of the patient's attempting to walk
He was again confined, and with the same good effect,
and in this way the hemorrhagy and tumefaction re-
turned and disappeared for several times — When I was
called I ordered him to be confined to his bed, with his
feet raised considerably higher than his head; he was

bled and kept on a low diet— By these means the artery is
healed and the patient entirely recovered— A Physician
in this city had an artery wound with a lancet in vein
section, the consequence was varicose aneurism; in this
case the artery closed in a few months, and the aneurism
entirely disappeared— In cases of this kind when the
wound is supposed to be of a trifling nature, I would
not advise taking up the artery; it will generally suffice to
keep the patient on a low diet, and avoid every kind
of irritation calculated to increase the circulation— A
case is related of a Gentleman who received a wound in
his thigh ½ an inch in depth and ½ broad which bled about
"by" or more. A friend applied his finger over the wound,
and in an hour it closed, after which a light bandage
was applied over it— The next day a Surgeon being called
stuffed it with lint, and continued to dress it in this way
till the 20th day, when by introducing a probe he produced
a recurrence of the hemorrhage of which the patient died—
In this case the patients death was undoubtedly oc-
casioned by the interference of the Surgeon; so well an

1 After having stopped the hemorrhage what would you do next—

Why is adhesive plaster spread on linen to be preferred to that spread on leather—

Ans: Because the former will not rot and the latter will

2 What is to be attended to in applying adhesive plaster

3 Why would you leave a vacant space between the different strips—

convinced of this fact, that had I been called on in the
court of Justice I should most unquestionably have depos
that the patient was killed rather by the Surgeon
than the man, who, in the first instance, inflicted the
wound— After we have succeeded in stopping the flow
of blood, the next thing is to close the denuded Surfa-
ces with sticking plaster and bandages, or sutures,
in most cases sticking plaster will suffice— 2 In order
to apply the sticking plaster, small strips of it must
be cut and laid on ½ an inch distant from each other
so as to afford an escape for any blood, Serum or pus
that may collect beneath, and by these means prevent
a large abcess, which might otherwise be formed—
Compresses and bandages are to be applied over these,
Union will take place in this way in 24, 48 or 72
hours— Should inflammation proceed to any extent and
the pulse strong, bleeding, purging and low diet, accor-
ding to the state of the System. If these Symtoms do not
appear a contrary treatment is demanded— This mode
of treatment is proper in all Kind of wounds except

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1 Why would you not use the adhesive plaster in wounds made by Glass or any extraneous matter

2 What the advantages of adhesive plaster over Sutures—

3 What are the cases in which sutures are necessary—

those made by Glass, or where any extraneous matter
is confined and where it is necessary to dilate the wound
and promote Suppuration in order to dislodge the
extraneous matter. Transverse wounds on the extremities will heal in this way without any difficulty,
provided a relaxed position of the muscles be preserved.[2] The advantages of the adhesive plaster o
ver the Sutures are manifest from the pain occasioned in passing a needle, which makes a puncture
wound, the Suppuration occasioned and the irritation excited by the ligatures remaining in
the wound. In some cases, however, sutures are indispensible,[3] as in wounds of the Tongue, Lobes of the
Ear & muscles of the Abdomen communicating
with the cavity, in all which cases, if sutures were
not used, the parts could not be relaxed in conse-
quence; wounds of the Scalp and Scrotum are to be treated Similarly.

the interrupted and twisted suture

the best

Contused Wounds

In contused wounds a considerable part of the part

1 How long would you continue the poultice

2 After Granulations have formed how would you

is killed and much injury done to other parts; contused
wounds are sometimes attended with considerable pain,
which is to be relieved by anodynes and a poultice of bread
and milk kept on until Suppuration takes place;
should inflammation supervene, venesection and purg-
ing according to the state of the system; if the contrary
symptoms should appear, Bark, Wine and a nourish-
ing diet should be prescribed - After Suppuration is
established and all extraneous matter removed, the
sides are to be approximated as "In incised wounds" -
In slight wounds where union is expected to take
place naturally, it is common to put a compress di-
rectly over the artery; in my opinion such treatment
appears highly improper, because the clot that forms
in the vessels must sooner or later have vessels to pass
through it; now the compress by its pressure will tend
to prevent the formation of these vessels, or if they do form
make them gangrenous and consequently cause
them to slough off; besides it is difficult to make the
pressure directly on the orifice of the artery; if it should
be made a little below it, it will only serve to increase

Is it proper to dilate a punctured wound.

the impetus of the blood against the wound and subsequently also the hemorhagy - The most proper application is a light compress with adhesive plaster and a low diet, rest and a proper position of the limb - Adematous swelling of the parts often occurs, from the use of the compress, more especially if the compress be introduced within the wound - I've seen a puncture in the tibials and fibulas treated in this manner, when the whole limb became adematous, and the hemorhagy returned; the situation of the parts was such that the utmost difficulty and danger would be involved by cutting down to the punctured artery -

Punctured Wounds

These wounds are produced by sharp pointed instruments; they have a small external opening and frequently considerable depth; they partake of the nature of Lacerated wounds - All searching and probing must be avoided unless it is to remove some extraneous matter; and even then they should be dilated immediately or else the extraneous matter suffered to remain while suppuration

1 When would you dilate a punctured wound

takes place - Here I would observe that incision is less dangerous than probing - Emolient poultices must be applied, low diet, sudorifics & anodynes, until Suppuration and granulations have ~~formed~~ taken place, then the sides may be approximated as in "Incised wounds" - After matter is formed if it does not force an opening externally we are to make one of such size as to admit of a complete evacuation of the matter; enlargement of the wound is also necessary when a vessel is wounded in order to get at it - When a punctured wound is attended with convulsion, enlargement of it is necessary - A Lady accidently stuck a needle into one of her fingers, which produced violent convulsive Symptoms; upon introducing a small probe and dilating the wound with a Scalpel the convulsive symtoms ceased - A Lad in jumping over a fence fell with his Knee upon a nail which pierced the flesh a little above the tubercle of the Tibia; he was affected with severe pain immediately after, which continued so violent that he was obliged to take, at night, an anodyne

1 How are wounds of the Eyelids to be treated

the next day he complained of severe pain in the head, back and neck, pain and tention of the Epigastrium, his pulse was quick, frequent and tense, all of which symtoms were direct-ly removed by passing a director into the wound and dilating it; the cure was completed by common poultices Punctures in warm weather should be prevented from healing by means of stimulating applications or by extension with the knife: unless this is observed Tetanus is apt to occur — We come now to speak of wounds of particular parts, and first of

Wounds of the Eyelids

Incised wounds of the eyelids may be effectually cured with adhesive plaster generally, but if this be not sufficient, especially if there be any loss of substance, sutures must be resorted to; in this case they must be carefully introduced, taking great care not to wound the adnata, as in that case considerable inflammation would be the consequence In order to prevent such an accident, the needle should be passed through the skin & cellular membrane only; should inflammation notwithstanding take place, it is to be combated

1. How would you treat wounds of the eyeball.

2 What application would you make external

by the antiphlogistic measures to be mentioned hereafter— Sometimes
the ball itself is swallowed. I knew a boy, who, in making a pen, stuck the
knife in his eye, wounded the cornea and afterwards forced out
the aqueous humor by rubbing it with his fingers: Such injuries are commonly produced by ~~pieces~~ sand or glass driven with
force; they adhere very close and are seen with difficulty— I
have known a shot divide the ~~cornea~~ Sclerotica, just behind
the cornea, the Iris and penetrate into the Chrystaline Lens;
in all these cases Vision is entirely destroyed; the Iris may close
form adhesions with the Chrystaline Lens, which also becom opake
and the pupil be entirely destroyed— In the treatment the
extraneous matter is to be removed, Inflammation is to be
Subdued by venisection, low diet, Cupping, Scarifications and
Blisters— The best external application is ~~a~~ an infusion
of the pith of the Sassafras or milk and Water— The eyelids
are to be kept closed and the patient confined in a dark Room
By these means opacity and adhesions may frequently be
prevented— If blindness should follow it may be relieved
in some instances by an operation— The inflammation conse-
quent on the injuries received, sometimes ~~resist~~ every means

we can adopt - I once knew a lady who passed a needle thro
the Pupil into the Chrystaline Lense, the inflammation that
succeeded was very violent, and notwithstanding the most
rigid observance of the antiphlogistic treatment it could
not be arrested until Calomel was used, which produced
the happy effect of subduing every inflammatory Symtom as
soon as the mouth was affected - From perfect blindness
the sight became, in a great measure, restored, as but
little opacity remained -

Wound of the Face

The Face is subject to all kinds of wounds - The treatment
consists in bringing the sides in contact, when it is practible
to make a cure by the first intention - If the wound be con-
tused poultices must be applied until free suppuration
takes place, and then the sides approximated by strips of
adhesive plaster - Sutures should never be used, I
recollect to have seen a Young Lady, in other respects hand-
some, who had one of her cheeks much deformed from
Sutures applied in a wound she received on her cheek -

1 How would you treat wounds of the Lips—

2 How would you treat wounds of the Tongue

Wounds of the Lips

In wounds of the Lips, if there be no loss of Substance adhesive plaster will be sufficient, even tho' they be cut through in the event of a portion being lost, Sutures become necessary also in the anterior part of the tongue — Wounds of this kind generally happen in children, who fall with Tongues out of their Mouths, which will of necessity be cut by their teeth — The interrupted Suture must be used in these cases, the stitches are to be made while the tongue is drawn out with a tenaculum — These Sutures may be removed in 6 or 8 days, during which time the patient must be supported on Spare victuals — Sutures are also necessary in external wound of the Ear —

Wounds of the Throat

Wound of the Throat are generally made with the intention of committing Suicide; when the skin only is divided the treatment is very simple, but in most cases the Trachea is either completely or partially divided; Sometimes the Asophagus or Pharynx is also divided — The muscles being divided anteriorly, the Jugular Veins with the Carotid arteries

become exposed — The first thing demanding our attention
is to stop the hemorrhage as soon as possible, by securing
the bleeding vessels both Arteries and Veins in order to pre-
vent the flow of blood in to the Trachea; after this effected
we must close the breach in the Trachea by means of adhe-
sive plaster in partial and small divisions, and
Sutures in complete divisions. When Sutures are used, the
Legature is to pass thro' the skin and cellular membra-
ne only, which will be sufficient to retain them in apposition
Indeed, sutures in the Trachea can never be of service,
because they always excite a troublesome cough, which
in a very short time tears the stitches out, thereby ren-
dering them wholly useless — Plaisters and external
sutures are all I would recommend for this purpose;
the head is to be bent forward and retained in that
situation by bandages, which will contribute to the
union of the divided surfaces — The sides should not,
however, be too closely united, for fear of confining the blood
or mucus, which may have been collected internally; I
have known death produced by the omission of this precau-
tion — When the Oesophagus is divided, the danger is

If cough occurs it must be relieved by Opium

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greater, on account of the difficulty of keeping the parts
at rest, till union takes place, as coughing and Sw=
allowing will force them apart and prevent their union
This may be obviated by introducing a flexible cath=
eter thro' the Nostrils in the Oesophagus and passed
below the wound; the Trachea cannot be managed in
this way on account of the blood and mucus that are coughed
up— When the Trachea and Pharynx are both wounded,
the Pharynx must first be united by the interupted Suture
and afterwards the Trachea in the same way only the
Sutures must pass in thro' the Skin and Cellular memb=
rane— The cough may be relieved by demulcent and anodyne
drinks— It has been doubted whether the Trachea can be
divided without also dividing the Carotids; of this, however,
I've no doubt, as I've myself seen a case where a maniac, com=
pletely divided the Trachea and exposed the Oesophagus
and Carotid Arteries— The Pharynx can be wounded without
any division of the Trachea or Larynx, as I saw in the case of
an old woman, who, being weary of life, to end her troubles, pu=
shed a pen Knife into the Pharynx just behind the Larynx;

fluids flowed out at the wound when taken in at the mouth, the fissure closed with adhe= plas= and the patient survived.

Penetrating — Wounds

Penetrating wounds may enter the sides of the abdomen or Thorax, in which case their danger is mostly increased; the imperfection of the cavity excites inflammation on the internal surface, which destroys the life of the patient — When the Thorax is perforated, air is admitted into the cavity of the Pleura, the lungs collapse and respiration is rendered difficult and laborious; if the lung be injured, blood is coughed up and flows into the cavity of the chest rendering respiration stile more laborious and oppressive; Should the intercostal artery be wounded it has been recommended to pass a ligature with a compress, round the rib, so as to compress the artery; I've never made trial of this method — Incised and punctured wound heal by the first intention, especialy if assisted by adhesive plaster & in gun shot wounds it is different, for in these the shot has open a large hole at their entrance and at their exit, the parts thro' which they pass become killed and the imperfection of the cavity is very considerable; hence violent inflammation

1814.

and Sloughing of the parts are the consequence — The inflammation is to be combated by low diet, copious bloodletting, purging and blistering — To prove the efficacy of the plan I need only relate the case of a young man who came under my care not long since, who in a careless manner in pushing off a boat, fired off a gun and received the whole load, wad &c all, into the right side about two inches from the Sternum, which came out about three inches from the entrance — In a very short time he complained of very great oppression — The air entering the chest at the wound made a perceptible noise — The only pain he complained of was in the wound — He was bled by the Physician who attended him, and the wound covered with light dressings — The ensuing day I was called to see him; I had him bled and purged; poultices of bread and milk were applied enclosed in a gauze bag, in order to excite Suppuration. The reason why the the poultice was enclosed in the gauze was to prevent any portion of the poultice getting into the cavity of the chest, which would have been attended with bad consequences: this should always be attended to — Early on the third day this patient complained of a violent pain in the right side, extending to the shoulder, but was not attended with cough, this was relieved

by a copious bleeding; on the fourth day a Serous discharge took place from the wound, which is one of the terminations of inflammation - Had not an external opening been made for the evacuation of the fluids, there is no doubt but that Hydrothorax would have been produced, which is one of the terminations of Pleurasy - The patient was now unable to, rest in a decumbent posture and the occasional returns of pain and fever was relieved by fearless bloodletting, so that in the space of 12 days he lost 18½ of blood - On the 14 day the Serous discharge ceased and pus appeared, which was soon succeeded by granulations, and the complete recovery of the patient - Some Surgeons advise attempts to be made to expell the air from the cavity of the chest, this I deem unnecessary as I do not believe that the air thus admitted has any tendency to cause inflammation of the internal surface of the cavity, as contended by them - Of this fact I convinced by the following experiments, instituted in order to settle this contested point - I made a small opening into the Thorax of a Kitten and injected into it a quantity of air by means of a blowpipe, after which I closed the aperture the Kitten played as usual without any symtoms of disease

or uneasiness - finding that no obvious effects would occur at the end of 3 days I killed it, but on examination could discover no signs of inflammation - A similar experiment was made on a dog and with the same result - M.r Hunter attributes the inflammation that occurs, to the imperfection of the cavity, but I rather suppose it to be owing to the dry state of the surface produced by coming in contact with the air, which may prove a cause of inflammation by depriving them of their moisture - I will relate another instance in confirmation of the innoxiousness of air as applied to internal surfaces A man was stabbed, above the pap with a dirk which made a wound about 1/2 an inch long, through which the air passed in and out freely - I was called to see him and when I arrived I found his extremities cold, countenance & and his pulse small, quick and irregular: the wound was dressed with adhesive plaster and bleeding was prescribed: in six days this patient was well - The bleeding in this case was intended as precaution against inflammation which was entirely prevented -

Wounds of the Abdomen

When wounds of the Abdomen are superficial no treat-

=ment is required different from that of wounds in other
soft parts; but when it communicates with the
cavity of the belly, when union by the first in-
tention should be effected if possible in order
to prevent peritoneal inflammation and wea-
kness of the Peritoneum at that part —
For this purpose the "Interrupted Suture" be-
comes necessary, which is made in the fol-
lowing manner, Viz: a ligature is to be
armed with two needles, which are to
be passed at the distance of one quarter of
an inch from within outwards; of these
there are ~~4~~ 6 a sufficient number to be
made in the same manner at about ½ an
inch distance — Often in this way passing
a sufficient number, they are to be
tied on the same side — The Antipth-

ogistic regimen with depleting remedies (par-
ticularly laxative medicines) is to be observed.
When adhesion has taken place the ligatures
are to be removed and adhesive plaster
substituted. Our treatment, however, must
be varied according to circumstances, for instance
, when any of the viscera as the stomach or
intestines are wounded, we must search
for them in order to unite the breach, &
prevent their contents being effused into
the cavity of the Peritoneum, which would
occasion inflammation of that mem-
brane and the death of the patient —
Case — A man plunged a bayonet into
the right Hypochondrium of another
(with whom he had quarrelled) about
equidistant from the sternum and
spine; in a short time he vomited

blood and complained of excruciating pain
in the epigastrium; his pulse became
weak and his extremities cold, which was
(however) followed by some slight fever;
He was bled, took a cathartic, which was
promoted by a clyster; poultices were applied
to the wound — All these remedies had no
effect and the patient grew worse until the
third day when he died — On opening
him after death, I found a considerable
quantity of red fluid in the belly and
the intestines all adhering together; The
Bayonet had entered the cartilage of the
second false rib and entered the stomach
about 3 inches ~~below~~ ~~the~~ from the Pylorus
out of which a quantity of liquor he had previ-
ously been drinking was discharged into
the cavity of the peritoneum — In this

case the wounds had both united by the first intention, so that the death of the man was induced by the inflammation excited in the Peritoneum by the Porter – It is always proper in these cases to enquire what the Patient had eaten or drank previously, as the nature of the contents of the stomach may vary the inflammation thereby produced, and should the wound be small & a liquor quantity consequently can get into the cavity of the Peritoneum – It is probably owing to this cause that Indians just previous to their going into Battle as well as to render their wounds more capable of healing – In most cases a portion of Omentum is protruded when the seat of the wound is obvious, if not we must decide from other circumstances – The existance of a wound in the stomach may generally

be known by a discharge of Alimentary matter
, also by vomiting of blood — When the great
intestines are wounded a discharge of Blood
and faces thro' the external wound, and bloody
stools take place, in those cases there is gener-
ally more or less nausea, Vomiting, fainting,
cold extremities, weak pulse, and sometimes
death takes place in a few hours — Convul-
always precedes dissolution — As soon as we
discover the stomach and Intestines to be wou
-nded, we should endeavour to unite the
divided surfaces as soon as possible by
means of stitches, three or four stitches will
generally suffice, the ends of the ligatures
are to be cut off close and the viscera ret-
urned — It has been customary to bring
out the ligatures at the external wound;
but the experiments of Cooper have proven

this to be unnecessary and even attended with injury by proving a source of irritation to the Wound — When the ends are cut close to the knot, the ~~cord~~ thread when it comes away will pass into the gut and be evacuated with the faces — Transverse wounds are said to heal more readily than longitudinal ones, because in stretching, the diameter of the intestine will be diminished; this I believe may readily be obviated by taking proper pains in the introduction of the sutures thro' the intestine, or otherwise the whole portion of the gut might be cut away as far as the longitudinal wound extended, thus creating a transverse wound from a longitudinal one ——————

Wounds of the Omentum & Mesentery

In wounds of the Omentum and Mesentery attended with hæmorrhagy, the bleeding vessels are to be sought for and secured with ligatures, which are to be left out at the external wound, because they would produce an abscess in some part of the Abdomen from the

impossibility of their escape by the intestines —
That portion of the Omentum or Mesentery which
is wounded should be brought also as near the
external wound as possible, to prevent the ligat-
-ures from rubbing against the ~~[illegible]~~ sides
of the Peretoneum, and thereby causing in-
-flammation — In cases where the bowel
does not protrude, a question arises whether
-er the wound should enlarged or no — I
would always, in those cases, advise the
dilatation of the external wound so as to
come at the intestines, because there is a
probability of the injured intestine being
caused to descend by this means — The extension
of the wound should never be carried far, since
there have been instances of recovery from wou-
-nds of the intestines, in which no sutures were
used; here the union took place by the first
intention and no inflammation ensued —

Case A Negro received the contents of a pistol
in the right flank just above the Ilium—
The whole load went into the Intestinum
Rectum, and a number of the shot came
away with the stools— He complained of pain
in his belly, was bled, had fomentations
applied to his Abdomen and took Lau-
danum to keep his bowels at rest— By this
treatment he got well in three weeks— Shot
wounds dont generally terminate so favorable,
for the contents of the Intestines will sometim
get into the Cavity of Peritoneum and occasion
Peritoneal Inflammation— A Girl received
the contents of a Pistol in her Belly, she complain
of violent pain there, her extremities were cold
and pulse weak, she lived but 12 hours— On
examining her I found the gut open and a
worm of the Lumbricus kind had crept thro
the wound, which no doubt caused the vio-
lent pain and rapidity of her death

In cases where the injured Intestine cannot be found the external wound should be stitched, and rest, low diet, with but little drink taken; Laudanum should be given to compose the Bowels; purges and Injections are highly injurious — Should Inflammation come on, Bleeding, Fomentation to the Belly and Blisters are to be given —

Other Viscera are sometimes wounded as the Liver in wounds of the right Hypochondrium this depends on the direction of the Instrument after it has entered the external part — A dull heavy pain is felt in the left side and axilla. A small wound will heal without much difficulty; but if it be large, death is produced by the Hemorrhagy, the blood destending the Abdomen to a considerable size; should the Hemorrhagy in this case not prove fatal immediately, yet it will excite inflammation in the Peritoneum and eventuate in death —

The Blood may also get into the excretory duct and be evacuated with the faces — all that can be done in these cases is to keep the Patient on Barley water, and guard against Inflammation by Bleeding, Purging and Blistering ooo.

Wounds of the Gall Bladder

Wound of the Gall Bladder always prove fatal in consequence of Bile coming in contact with the Peritoneum, which produces inflammation in consequence of its acrimony ——.

Wounds of the Pancreas

Wounds of the Pancreas, the leive are always fatal.

Wounds of the Kidnies

Wounds of the Kidnies are attended with a discharge of Bloody Urine from the Bladder; when they occur in the posterior part of the Kidny there is not much danger, the Urine will continue to flow till the wound is healed, but when anteriorly situated the Urine escapes into the Peritoneum, which causes death

proper inflammation

Wounds of the Fundus of the Bladder

Wounds of the fundus of the Bladder prove fatal from the urine escaping and producing Peritoneal Inflammation, but those of the "Neck of the Bladder" are attended with little danger, as it lays anterior to the Peritoneum — In order to shew that wounds of the Viscera are not so dangerous as is generally imagened, the following Case communicated to me by Dr Archer of Maryland, will suffice — A Man received a stab from a knife, which entered the left side and penetrated into the stomach; it entered between the Cartilage of the false ribs; the wound externally was 3 inches and in the stomach 2 inches, the contents of his stomach which he had taken at dinner, came out at the wound — No Surgeon being at hand, an old Soldier sewed up the wound with a ~~awl blade~~ Awl and Shoemakers end — The

Surgeon did not see him till the third day, when he removed the threads (which had already come thro' the flesh), and applied adhesive plaster — The Patient was confined to a low diet of thin strained soup — On the 7th day he experienced no pain and the wound suppurated good pus — He now complained of a soreness in the right groin, which was attended with redness and swelling. Poultices were applied which produced suppuration and on opening it, a large quantity of pus and Cabbage were discharged — The Cabbage he eat previous to the wound — He complained more of this swelling than of the wound in the stomach — This ulcer healed and the patient entirely recovered; but a portion of Cutis which had formed in the wound made a sort of pouch which swelled and subsided according as the stomach was full or empty this however was no inconvenience to him —

Wounds of Joints communicating with the cavity

These demand our immediate attention in order to unite them as soon as posible, that inflammation and Suppuration may be prevented —

Incised Wounds of large Joints are sometimes followed by inflammation and Suppuration to such an extent as to render amputation necessary to preserve the life of the Patient, or if suffered to go on a stiff joint at least is the effect; in this case it is important to observe that posture for the limb which will render it most useful to the patient, at at the same time favour the union of the divided parts; the surfaces are to be kept in contact by means of adhesive plaster sutures W^e May recommend, to keep the parts united, but I think if a proper position be observed and adhesive plaster used, there will be no necessity for Sutures — Should you use them it is important to ~~observe~~ observe that you do not

include the Capsula Ligament — The following
case will shew the facility with which wounds
of this kind unite when properly treated — Case
A Gunsmith by accident struck his chisel against
his knee with such force that the point of it
penetrated the capsula ligament; I united the
edges with adhesive plaster and applied a
splint long enough to extend from the Ischi
-um to the Ankle, in order to keep the limb
at rest — The Patient was strictly charged
not to attempt to move the limb — In a
week the wound completely healed, and
he retained the entire use of his joint —
I have seen other cases heal equally readily
by the first intention, even when the Cartila-
ges and Bones had been considerably injured —
When wounds of this kind are not properly
treated their effects are very different as in

the following Case. A Boy wounded the Patella with a Hatchet; the Surgeon who was called, dressed the wound by pushing lint into it between the divided surfaces, down to the bottom of the wound and then covered it with adhesive plaster — When the first dressings were removed, he again inserted the lint after wetting it in Spirits of Turpentine, and continued four months to his bed, during all which time he was unable to bend the Knee without the most excruciating pain — The part swelled and inflamed violently, producing fever and delirium; the slightest motion caused convulsions — At this time I saw him, and in order to relieve the symptoms I ordered him to be bled (several times), purged and Blistered, but notwithstanding, abscesses formed around the joint, the leg became Edematous and water collected in the abdomen — To remove those symptoms a course of strong mercurial purges —

was resorted to; this had the desired effect and I had the pleasure of seeing this patient recover in 4 Months but Anchylosis had formed in the joint and he lost the use of his limbs — The terrible consequences resulting from improper treatment in this Case on the commencement, proves the propriety of healing the parts by the first intention whenever practicable — Whenever the Capsular Ligament is wounded we should always make use of a splint in ordr to keep the limb perfectly at rest, which prevents convulsions and moderates the Inflammatory symptoms and swelling of the soft parts — The Joint is to be kept at rest, in the posture in which the Surgeon finds it — When the Cavity of a joint is opened by a lacerated wound, it is impossible to unite them by the first intention In this case such a posture must be observed as will favor the approximation of

of the divided surfaces; Poultices must be applied until suppuration takes place and granulations form, than adhesive plasters substituted — Sutures are not admissible, as they aggrivate the injury — Bleeding both general and local are to be used, to reduce the inflammation (the local by Leeches), purges are to be used when not much motion and pain will be produced; Blistering is also necessary — The inflammation of the Cavity of wounded joints does not appear to run to such an extent as that of other parts; this I believe is owing to the Synovia intervening in these cases — It is important to recollect that of all the remedies, splints are by far the most important — Small wounds of the joints of the fingers in which the capsular is injured will not heal without a splint applied along the side of the finger to keep it extended and at rest — I knew a young Lady who scratched her finger with the point of a needle, and thinking it a trifling injury applied a piece of Court plaster to it, in two days it had inflamed considerably and was very painful

but by my applying a piece of pasteboard to it as above
directed it be healed in a few days. Wounds of joints
where the limb is not kept at rest, any adhesions or
granulations that may form, are torn asunder by
the first motion of the limb, besides I've known a great
deal of trouble resulting from a neglect of these mea-
sures, in very extensively lacerating wounds of the
Knee & Elbow, especially when the bones are dislocated
and fractured, it may become a question whether or
not we should amputate in order to save the patients
life - Should amputation not be performed immedia-
tely, exhaustion, mortification with delerium may follow,
either of which may prove fatal - A Man was brought
into St Georges Hospital with his elbow joint
externally lacerated, by a Cart running over it;
the ends of the bones were shattered and their
fragments pushed into the Cavity of the joint
the patient would not submit to an operation,
the wound was dressed with Sutures and ad-
hesive plaster, and the limb placed in an
extended position; here I would observe

that the whole of this treatment was highly and
proper; neither Sutures nor adhesive plaster should
be used in a wound which must eventually sup-
purate, until after granulations are formed;
and the flexed position of the arm would cer-
tainly have been much more proper; for had
the Man recovered Anchylosis would have formed
and the his extended limb would have been useless
The dressings were secured with a roller which
was also improper, as it rendered the limb more
painful when inflammation took place — My
treatment of this Case would have been poultices
until suppuration took place and granulations
were formed — This Man (treated as described) was
soon affected with vomiting and an excruciating
pain in the arm; on the 4th Day the edges of
the wound were tumefied and vesications formed
poultices were now applied and Opium given
to procure rest — On the 5th Day delirium came
on, the part grew blacker and the vesications

increased; On the 7th Day the delirium increased the part mortified, the extremities became cold and in 20 hours the Patient died - Now in this case had the Patient submitted to the operation, he would in all probability have recovered - In cases where mortification does not occur, Tetanus is apt to take place especially in warm climates; if not Tetanus, extensive suppuration, Exfoliation, a tedious ulcer and Hectic may succeed, which generally terminates in death - Even if the Patient recovers from all these dangerous consequences, an anchylosed Joint and useless limb will certainly be the consequence - In some of those cases, it is difficult to make a prognosis, but I would observe, that they generally terminate fatally, of which the Patient should be informed and permitted to choose whether the operation be performed or not - We should also recollect that the danger is always greater in warm weather and intem-

private persons and that young people are more likely
to recover than old ones - If the Patient will not con-
sent to the Amputation or if the surgeon should
deem it unnecessary, then the most advisable mode
of treatment should be resorted to. In incised
wounds of the Joints, the parts may be restored to
their healthy state when treated as already point-
ted out; indeed in some cases, even when the
surfaces of the bones constituting the joint are consid-
erably injured, the parts may be nearly restored to
their original condition; In other cases, stiffness
is the consequence; this is occasioned by a ligamentous
union of the Cartilages to the bones forming the
joint; In others Anchylosis or an immoveable joint
is produced; but before this can take place; a removal
of the Cartilages of the joint must be effected, in order
to understand which it is necessary to make some
observations on the nature of Cartilage - Cartilage
never inflames, suppurates, granulates or exfoliate,
to illucidate which I will relate a case. A Man
received a load of shot in the anterior front of
the ancle of the Leg - Suppuration, Hectic, Sickness

Vomiting and slight sweats succeeded to such a degree as to render amputation necessary — After the operation half of the astragalus was perceived deprived of Cartilage and granulations had formed; The Cartilages of the other bones had in a great measure separated from them, and shot was found in the soft parts around the joint — The Cartilages had been removed by absorption and the Patient would have recovered if his strength had not been exhausted by his excessive night sweats — In this way Anchylosis is formed and the injury is repaired tho' the joint is destroyed — The first effect which is produced in wounds of the joints end in suppuration is to excite inflammation in the bones (for none can take place in the Cartilages) the absorbents are stimulated to increased action, and by acting on the Cartilages, remove them; granulations form after suppuration take place, in the same manner as in compound fractures — In wounds of all joints possessing much motion it is impossible to effect a restoration without the use of a splint, as without it, the wound instead of healing, continues to grow worse

Wounds of Nerves and Tendons

A complete division of a nerve is followed by slight pain numbness and paralysis of the part to which it belongs— A partial division is attended with symptons sometime more dreadful (tho' not always) than any in surgical operations— Authors agree that this accident happens most frequently in Venisection; altho' it is certain that no surgical operation of any importance can happen without the division of a considerable number of Nerves— When Nerves are wounded, inflammation extending beyond the injury, great pain and swelling, fever, delirium and often death are the consequences— The same effects proceed from a wound of the Veins— When the symptons occur after Venisection they are attributed by Authors to the division of a Tendon" but this is generally incorrect and of course the dreadful operation of making an Incision down to the bone becomes unnecessary in most cases— If the Patient complains of numbness in the arm soon after V.S. and the pain increases for two or three days, there will be reason for suspecting that the nerve is injured and incision may be resorted to

; but such cases are extremely rare — In my very extensive practice in Philadelphia, where Bleeding is much performed, I have never had occasion to resort to incision of this nature — Both Nerves and Tendons, cut by a sharp Instrument will heal readily and it is only when they are penetrated or contused, that the dreadful symptons of pain, Inflammation, Swelling, delirium and fever supervene — Wounds of Tendinous expansions are attended with the same bad consequences, when the injured part is covered and composed with a large mass of surrounding tendinous expansion — In these Cases a division of the Tendon will afford relief — Accidents of this kind occur most frequently in the Fascia Lata of the Thigh and in the aponeuroses of the Head — It should be remembered that Blisters almost entirely dispel these symptons and should be constantly used and persevered in — Should this however prove ineffectual we must proceed to the division of the Fascia, by which means any matter collected there will be evacuated and the part from compression — When Tendons are entirely cut thro' (as in incised wounds of other parts) the parts are to

be approximated and kept in contact till union takes place — The most favourable position, with proper Bandages, Splints &c are to be observed — In division of the "Tendo Achillis" a splint is to be applied on the fore part of the leg, so as to keep the Foot extended and the Tendo Achillis perfectly relaxed — A Buckle and Strap may be used for the same purpose, and bandages applied on the upper part of the leg to prevent the action of the extensors of the Foot, will be of considerable advantage ——

In approximating the sides, care must be taken not to include the Integuments, as it would certainly prevent union —— " —— "

Wound of Veins

These generally give us little trouble — In some cases however, inflammation attacks the external surface and extends up and down for a considerable distance; this has been proved by the experiments of Mr Hunter — He says that in cases where the Cellular Membrane is attacked by inflammation (brought on by Sur-

gical operation or other causes) the internal surface of the
Veins like other parts, are liable to inflammation,
suppuration and ulceration — An abscess however is
prevented in the divided part by the matter being dis-
charged into the general circulation — If inflamma-
tion occur in any part between the divided surfaces
and the Heart, an abscess will be produced, which will
discharge its pus (externally) in the general circu-
lation — This is satisfactorily proved by Pus being found
in the blood after death, and I think this account
will satisfactorily explain the seat of that inflammatio
which follows Blood letting and which has been attri-
buted by some to a wound in the Tendon merely bec-
ause there is a tendinous expansion found attached
to the Biceps Flexor Cubiti; by others to a wound
in the Nerve; and by others again to a defect in
the Constitution — Yet the same symptoms have
occurred when it was not possible that a Tendon
or Nerve could have been in the way, and in
persons of a perfectly healthy constitution —
When Veins are wounded and do not bleed

by the first intention a small abscess may form between the Vein and skin and if it burst externally will produce no injury; but should it discharge internally, the pus coming in contact with the inner surface of the Vein, excites inflammation both above and below the wound; In this case the abscess being situated between the skin and Vein the inner surface of the Vein must have healed previously by the first intention; but when adhesive inflammation has attacked the Vein an obliteration of the Canal by a union of the sides of the vein may be the consequence If suppuration follow from this adhesive inflammation being in excess an abcess will be formed internale, & from the discharge of it's contents, it may prove the parent of a numerous offspring diffusing themselves throughout the course of the vein, and also a great many adhesions of the vein between these abcesses, which resemble so many chords, the cavity of the vein being entirely obliterated - Hunter has seen the Vena Saphena exactly in this condition, consisting of a great many lumps with chords intervening; when this adhesion takes place all hemorrhage will be put an end to -

Death is produced by the pus being discharged internally exciting inflammation of the Heart and Arterial System by which means the constitution is brought to Sympathize with the blood Vessels — It is difficult for us to conceive how adhesions can form in the veins, because the coagulable lymph, which is the bond of union in this case, we should suppose would be swept into the general circulation, but the fact is undeniable — To ale these effects resulting from Phlebotomy we should be particular after performing this operation to make the side of the orifice overlap each other as much as possible that a just apposition may assist union by the first intention; our compresses should also be wide and thick to promote the same end — Adhesive plasters are by no means so proper as compresses of linnen — Where inflammation appears beyond the orifice a compress should be laid on that spot in order to cause and adhesion of the sides of the vein; if suppuration has taken place, the same must be applied above to cause adhesions and prevent the pus getting into the circulation — When the inflammation called Erysipelas commences at the orifice, we must first apply a plaster with a piece of court plaster over the orifice, by these means I've known the progress

of the inflammation arrested; whereas Doc Known death
to be the result of the terrible incisions down to the bone
which is sometimes advised — Many nerves are ~~divided~~ divided both
completely and partially in Surgical operations operations
where no dangerous consequences result — In wounds of
the Scalp and Facia Lata of the thigh a disease is produced
resembling what flow from matter being confined below; in
all these cases a free incision must be made so as to
evacuate the matter — Before an abcess can be formed in
a vein, adhesive inflammation must unite the sides
of the vein in two places so as to leave an interval be=
tween them, and the abcess will be seated in the interval

Gunshot Wounds

Gunshot wounds according to the older Surgeons were
of a distinct and peculiar nature, which some attributed
to a poison communicated by the ball, and others to fire
contained in it; these peculiarities are a black colour,
vesications, gangrene, sudden death, tardy inflammation
a discharge of Ichorous matter, sloughs &c which gave
some plausibility to their theory — Their contusions always
increased the danger and protracted the cure; they
consisted of acrid inflammatory substances, which

produced gangrene, Sloughs &c in the healthy parts.
As the phenomina of Gunshot wounds can be explained
in a much more rational and simple manner, without
the aid of fire or venom. Gunshot wounds are made
by hard & true bodies, and hence the parts be lacer-
ated more or less and be Rewere contused, therefore they
must be more difficult to heal than others.
The degree of laceration depends on the velocity of the
projected body; if it moves very swiftly, the parts with
which it comes in contact will be killed; these dead parts
must slough away which generally commences in 10 or
12 days. After the sloughs have come away, the aper-
ture becomes enlarged, and should any large vessels
be contiguous, a dangerous hemorrhage may ensue
from the sloughing of the vessel; the Surgeon should
always therefore be prepaired for this event. If the
Ball or body moves slowly the parts thro which it
passes will not be killed and the sides of the wound
may unite by the first intention; and for this reason
the wound made by the ball at its exit heals
more readily than the one at its entrance.

Gunshot wounds generally require the same treatment as other contused wounds - Dilating the wound is generally injurious except under the following circumstances - 1 when the ball is situated alongside the Trachea, in which situation it would prove fatal unless removed - 2 when the hemorrhage is considerable and the vessels cannot be secured - 3 wounds of the scalp where the brain is affected and where the Cranium is fractured, we must proceed as in fractures from other causes, Some Surgeons advise the removal of that portion of the skull which has been in contact with the ball, because it is Killed and may produce inflammation and suppuration of the brain; but to this I would object, because in some we would have to remove too much of the bone, and we are not always certain that it actually is killed. I think it is always better to defer ~~Trephining~~ Trephanning until the symptoms of inflammation and suppuration of the brain take place - For this event we should be watchful in order that the operation

may be performed immediately - When extraneous bodies lay superficialey so that they may be readily extracted - Dilitation will be admissible as it will lessen the inflammation and tend to compose the patients mind; Should they be deeply situated and there will be much difficulty in extracting them it is always highly improper to make any efforts either with a probe or any thing that will cause irritation and consequently increase inflammation Granby advises the use of the finger instead of the probe - The long Forceps ought in my opinion to be banished from practice as it ought never to be used - No injury will result from suffering the ball to remain, as we have instantiation of which, we have repeated cases where the ball remained in the body for a considerable time with inconvenience, and we know the wound heals equaly as well as when it is extracted - The ball seldom lays in the direction in which it entered - A man once received a ball in the outside of his ancle, and it was found above the thigh on the inside of his above his knee on the inside of his

thigh — A ball striking the sternum or cataloge has gone quite round the Thorax on one side and out at the spine — There are cases on record in which a said a ball has gone thro' the Thorax without endangering respiration — The best application to Gunshot wounds is a poultice of Lin seed or Bread and Milk to be continued till suppuration is established and the dead parts slough away; All stimulating and spiritous applications are improper unless there is not enough inflammation in the wound and Tetanus is apprehended — The constitutional treatment must vary according to circumstances — In most cases there is great prostration of strength with Cold extremities and depression of Mind — In order to remove these symptons a sudorific Anodyne composed of Opium, Ipecac and Nitre should be given — Bleeding has been advised to prevent inflammation, but I would be extremely cautious not to use the Lancet unless the symptons were urgent; as it has often produced Tetanus and killed.

the Patient, when without the use of Lancet, he would in all probability have recovered — after Tetanus has come on Amputation should not be had recourse to — but when suppuration is established, the Bark in substance or decoction must be given together with an invigorating diet — In Gunshot wounds of the Limbs where the Bones are shattered, the treatment vary according to the nature of the injury — The loose fragments are to be removed in the same manner as if it had no peculiarities When they take place in the Thorax they are accompanied with great inflammation unless the parts unite by the first intention — In some cases Bleeding must be resorted to and carried to a great extent — Dr Rush bled an officer who received a wound to the extent of 120 ℥ by which he saved his life and bled a young man until ℥ 180 were taken, with the same good effect — A very low regimen must always be observed — Blisters are usefully applied to the outside of the Thorax when it is wounded; the wound should

be dressed with a soft Poultice of simple Cerate — When the spine is wounded, palsy is produced and death takes place — In the Cervical Vertebra above the origin of the Phrenic Nerve, sudden death takes place — When the wound is lower down the spine the Patient may live several days — Wounds of the Abdomen are dangerous according to the Viscera wounded — A wound of the Liver to any extent occasions death by the effusion of Blood, followed by great depression, languor of the Circulation, Hiccup and insatiable thirst — Wounds of the Stomach are attended with great depression, Nausea and Vomiting of Blood — If in the intestines, the stools are bloody — The Kidnies, bloody urine — A ball in the Bladder has been the Nucleus for a stone — Gun shot wounds of the Stomach and Intestines are always productive of danger by their contents escaping into the ~~abdominal~~ Peritoneum — In all these cases little can be done except keeping the parts at rest, applying Blisters to the Abdomen and confining the Patient to a low

dent, Light dressings only are to be applied to the
wound – If the Intestine protrude they must be return-
ned and if wounded connected by the interrupted su-
ture in a manner to be here after mentioned – Hunter
relates the case of a Man who was shot just above
the Kidnies; the Ball which consisted of three
Balls made but one orifice at their entrance but
came out at two different places; at first the
urine was bloody, but this soon ceased and no
blood was passed by stool – There was no symp-
toms of Peritoneal inflammation and but a
slight fever – In two weeks I pronounced him
out of danger, being convinced that the parts
which were wounded must have united by this
time – In this case there was one continued
canal thro' the intestines according to the course of
the Ball – anteriorly this canal was closed by the
gut next to the Peritoneum adhering to it, but
posteriorly the Canal remained
open in the descending Colon and Feces passed
out at the end of two weeks, which was not a

symptom of any danger, for the opening gradually diminished and in a few days entirely closed.

Of Bullets which pass thro' Joints

If the Limbs be large, life will be endangered when the parts are much bruised and the bones much injured, unless by the first intention can not take place but inflammation and suppuration must follow — I have known a Patient so much reduced by the discharge that amputation became necessary to save his life — When the parts only are lacerated without much contusion, union by the first intention may be accomplished. I knew a case in which the Ball passed thro' the Knee joint and the Patient recovered with the use of his limb — Where the injury is very considerable and the patient is likely to die from immediate irritation, amputation will become immediately necessary and should not be delayed, because Patients more readily submit to the operation at

this period than at any other time, and delay may pro-
duce so great an exhaustion of the Patients strenght
that he cannot beare the pain &c— If a Man re-
ceives a gunshot wound in the Thigh and the
Ball passes near the Femoral Artery, the surg-
eon must keep a Tourniquet loosely applied
to prevent hemorrhagy if the artery sloughs
with the other parts— Having thus treated of
Inflammation and Mortification, it now
remains to give some description of their
consequences; I would observe that you cannot
pay too much attention to that part of sur-
gery which relates to the dressing of wounds
and Sores— I have already mentioned the
manner in which the parts are removed so as
to procure [illegible] an Ulcer I will now mention
the circumstance and treatment of Ulcers —

1981

Ulcers

I will begin with the "healthy" situated in a part of a healthy constitution – The cause is of no importance Granulations begin to sprout on the surface, producing by extravasation of coagulated Lymph which becomes vascular and the new vessels constitute these granulations – Previously to the formation of granulation there must be a discharge ~~from~~ of pus, of a light ~~cream~~ straw colour and of the consistence of cream, which will easily separate from the granulations, leaving them of a florid red colour – If the suppuration be free, the inflammation and swelling subsides, the surfaces contract and the granulations which follow, by their contractile power, greatly diminish the depth and size of the ulcer – This contractile power of granulations is so considerable that I have known them unite in 24 hours after being brought together – This is farther exemplified in operations on Cancerous Breasts, where a

large portion of the skin has been removed; there you may see the skin thrown into folds by this power— The last process in the formation of new skin after the granulations have arrived to a level with the old skin; the granulations which are of a bluish or whitish colour, begin to form on the ~~surface~~ circumference, and extend to the centre; sometimes they begin at more points than one — The Treatment of the atthy Ulcers is extremely simple, nothing but dry lint should be applied, spread with simple cerate to prevent the surface from becoming dry this is to be secured by a roller — In general nothing more is requisite, but the process of restoration may be expedited by applying adhesive straps over the surface, so as to approximate the edges. When an Ulcer is situated on the leg the hair should be shaved off before the application of the plasters, and we should be careful in every instance not to apply them too close to each other, because by conjoining the ends, a constant irritation will be kept

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up, which will eventuate in an abscess below. The roller should be applied from the foot to the knee, only moderately tight. In order to render the dressings easy to be removed, the sore should be bathed in cold spring water, before we attempt to remove the dressings; this will also have a good effect in allaying the heat & inflammation of the part. By these Bandages & Plasters the contractile power of the granulations is assisted and the surfaces sooner closed by the approximation of the old skin. Sometimes it will happen that the granulations are backward and the sore continues open a long time without any disposition to heal; in this case it becomes necessary to use some stimulating application, as a weak solution of Lunar Caustic, Blue Vitriol &c; if fungus arise Lunar Caustic must also be used to destroy it. Should these remedies fail, a cure may often be effected in indolent ulcers, by exposing them to the Air; by this mean a scale will form and underneath it a cuticle. This Ulcer in general demands but little attention; but I now pass to

the description of those which more particularly require
our attention; they are generally seated in the leg – In
the first place it will be proper to point out the causes
which prevent their healing – The Blood Vessels of the
lower extremities particularly the Veins are of a
firmer texture than those of the rest of the system
in a natural state; this is to obviate the effects
of gravity in retarding the circulation; but when
the leg is elevated, the new formed granulations
not having acquired much firmness, are incapable
of resisting the column of Blood they have to sustain,
hence we see pus discharged blended with Blood –
In other cases the Vessels themselves are weak and
not able to carry on the Blood which stagnates in
them, and causes the Ulcer to assume a dark purple
colour – The first circumstance happens when the
patient walks about or stands on the affected limb,
which always very much impedes the cure, by
producing new irritation and inflamation, in

-creased pain, bloody serum, sloughing of the granu-
-lations and in fact reduces the Ulcer to its former state —
The same effects are produced by a stagnation of the
Blood from weakness of the vessels; in this case our
principal remedies are position rest &c — The pat-
ient should be kept in bed with his legs raised
higher than his head so as to cause a flow of the
blood from the part — When we cannot get the pati-
ent to comply with our wishes in this respect, we
must resort to other means, by which we may pro-
duce a similar effect, such as bandages, splints &c
These are of three kinds 1st Laced Stockings, 2nd
Rollers of Muslin and 3rd Strips of Linnen
covered with adhesive plaster — The Laced Stock-
ing, sometimes answers very well, but it is diffi-
cult to get it properly made on which account we
are compelled frequently to substitute the muslin
Roller — Some Surgeons permit their patients to walk
about after the roller is applied; this I think al-
ways injurious —

In ale ulcers when there is much inflammation and when the granulations are luxuriant, rest and a proper position of the limb are highly assistant— If the cicatrization and granulations are backwards, then exercise by increasing the action of the parts is very necessary— In some cases I've seen washing the parts with Spirits have the same effect, probably a weak solution of Lunar Caustic might answer equally well.

Ulcers attended with odema of the Limb

I have mentioned that adhesive inflammation always precedes the suppuration and that the Cellular Membrane becomes united and condensed around the ulcer making a firm boundary; it is this boundary which constitutes the basis for granulations; but as the Cellular Membrane cannot yield in this situation from the distention of the skin caused in consequence of the water that is effused, the ulcer must receive considerable pressure which kills the newly formed parts & causes them to slough— If the Odema continues the ulcer will grow worse; it should therefore be removed by means of bandages and confinement in a horizontal position, taking care always to apply the bandages in the morning when the swelling is not so great, and likewise taking care to have the

bandages so applied as to exert equal pressure — A third cause that may retard the process of restoration in Ulcers, is the practice of stuffing them with lint to the bottom this always highly injurious — I shall now proceed to a description of the different kinds of Ulcers, and the treatment necessary to each —

They are eight in number — 1st The Inflamed, 2d the Fungous, 3d the Ulcer attended with Oedema, 4th the Sloughing 5th the Indolent, 6th the Carious, 7th that with Varicose veins, 8th that attended with a peculiar action —

The inflamed Ulcer is distinguished by a redness surrounding the Ulcer attended with pain and a discharge of serous fluid — The patient should be confined to a vegetable diet and be bled or purged according to circumstances — The application to the part is a poultice of bread and milk Confinement to bed should always be strictly enjoined; the patients feet should be elevated above the level with his body in order to facilitate the flow of blood from the part, which is in effect bleeding the limb, when general bleeding is inadmissable: this ought always to be attended to — As soon as the inflammation is reduced, the Ulcer returns to the nature of a simple one, and is to be treated as such —

Fungous Ulcer is accompanied with large granulations, rounded at the top and rising above the level of the surrounding parts - There is no disposition for cicatrization; the morbid granulations bleed from the slightest impression, and either possess very great sensibility or none at all - Simple pressure with a roller and adhesive plaster may sometimes succeed in removing the fungous; when this fails the Lunar Caustic applied only on the circumference, if the sore be large, but if small over the whole surface - Should no inflammation follow, it soon becomes a Simple Ulcer and should be treated accordingly - Astringent applications may have the same good effect, such as Oak Galls in infusion, for the dry Sulphate would probably cause the death of the parts -

Ulcers attended with Oedema, this is always attended with some degree of inflammation, pain tenderness and swelling - The granulations have a purple colour with many dark spots in them that have a sloughy appearance - Evacuations in most instances are necessary, but if prevented by the by the state of the patients constitution, we must substitute such a position of the patients limb, as will answer the same

this has already been pointed out — When the Oedema is removed, adhesive plasters and bandages must be used to prevent its recurrence — Sloughing Ulcers results from weakness in the granulations — In some old ulcers after the granulations have arrived at a level with the surrounding skin, they become of a black purple colour, mortify and slough off — In some cases the sloughing extends to the surrounding parts; in others, while there is sloughing in one parts cicatrization is going on in another; but generally there is a destruction of all the new formed parts only; it is attended with pain, febrile symtoms, and inflammation of the surrounding parts these effects are produced in consequence of debility of the granulations — In a case which came under my notice of a man who had an ulcer on each leg; that on one leg healed, while the other remained stationary — If symtoms of inflammatory inflammation accompany this ulcer, the remedies must be used accordingly — If mortification from debility takes place, we must use bark, wine and an invigorating diet; a poultice of light materials which exerts no pressure on the parts, must be applied to promote sloughing and when this takes place, a poultice of scraped carrots

boiled in milk, will produce suppuration - The fermenting will have the same good effect, with the advantage of correcting factor - Sometimes the ulcer becomes filled with maggots which may be destroyed by a weak solution of Vitriol or Muriatic acid - After the sloughs have come away and the suppuration is established, the disease is to be considered as a simple ulcer in a weak constitution -

I will now describe an ulcer that sometimes promises a speedy cure from the rapid progress of granulating and cicatrizing, but will suddenly assume a different aspect, and will have all the new formed substance removed by ulceration - This is called the Indolent Ulcer, the remedies for this species of ulcer are the bark, nourishing diet, Elixor Vitriol, and other stimulants; when these fail I've known a stream of cold water poured on the parts effect a cure - A weak solution of Caustic so as not to carrode the parts together with the Unguentum Elbinum may have the happiest effects; in one case which I attended after all the other remedies had failed in an old ulcer, a cure was effected by applying lint dipped in infusion of Galls - The indolent ulcer is produced by the process of Nature being frequently interrupted or prevented from ignorance or neglect - It has no

deposition to cicatrize, and is marked by hard, round tumefied edges on the surface of the granulations - The calosity which it possesses is the effect of the frequent inflammation effusing Coagulable Lymph in the cells of the cutis vera which is never absorbed, but keeps the edges in a distended and stiffened state; these must be removed entirely and the ulcer converted into a wound from accident before it can heal - This can be done 1st by the Knife, afterwards applying caustic to keep the granulations down - 2 They may be removed by Caustic applied to them until they cicatrize - 3 By pressure with adhesive plaster and bandages according to Baxter - When we use Caustic it must be continued sometimes that the edges may be completely destroyed, at the same time care should be taken not to touch the granulations in the middle of the sore - I must not omit to mention mercury as a remedy of considerable efficacy in cases of this kind - When we can produce ptyalism by mercury it always produces a cure -

Carious Ulcer.

In this a portion of bone is detached, which irritates the surrounding parts and prevents their healing - As soon as it is loose, if practible, it should be removed with a pair of forceps -

Sometimes it is difficult to determin whether the bone is loose or not, for instance when situated in the centre of the Femur—In this case we must pass a probe down to the bone and press firmly on it, if it be detached the fragment by pressing against the granulations will occasion considerable pain and frequently a discharge of blood; should the bone not be loose, no pressure against it will produce either of the above Symtoms—When we have acertained that their is a loose piece, we must dilate the wound and extract it—You must not suppose that you can ocertain whether the bone be separated, by the motion communicated to the ~~Probe~~ probe, else you will be deceived. The surest criterion is the existence of pain, as above stated— In many cases sponge (which consists of a peice of sponge dipped in melted wax) and when cold insinuated into fistulous opening will dilate it sufficiently to extract the loosened portion of bone, with the forceps— If this be unsufficient the scalpel must be resorted to unless you apprehend danger of wounding an artery, and in this case I have by means of a sponge (preserved in for some time) caused a sufficient dilatation

of the orifice to admit the extraction of the fragments of bone with the nippers, when the use of the scalpel was inadmissible — After the extraction of the exfoliated fragments, the sore will heal very readily — We now come to the seventh division Ulcers with Varicose Veins which always resembles in appearance the Indolent Ulcer, upon examination however the Vena Scapthena will be found enlarged — Formerly this was relieved by the Laced Stocking and Bandages, but it is very difficult to get a patient to persivere in them and besides we now have a much more speedy and efficacious cure — This plan was recommended by Mr Hunter and consists in entirely obliterating the cavity of the vein — He directs us to keep the patient a standing in order to distend the veins but find a Tourniquet loosely applied on the upper part of the Thigh so as to compress the superficial veins without affecting the arteries, has many advantages over his plan — The Patient must stand with his inner ancle turned towards the light after the Tourniquet is applied, the skin is to be pushed up into a trans-

-verse fold over the vein; at the same time an assistant
holding it on one side, while the Surgeon retains the
other and with the back of the scalpel turned towards
the vein, pushes it through to the skin; if this should
be too troublesome it must be removed with a pair of dissecting forceps by cutting Cateru-
-lly ~~with a ligature of dissecting~~ A blunt probe ar-
med with a ligature is to be passed around the vein,
the knot need not be tied, still the the patient be laid
in a recumbent position, the ligature will come away
on the ninth or twelfth day, but it better to remove
it on the 5th or 11, as the recovery will be thereby accelera-
-ted, sometimes the Saphena vein is enlarged,
and then there is little probability of success — Some
Surgeons do not use ligatures at all, but make use
of a fine compress to obliterate the vein after ha-
ving previously divided it across — We now come
to the eight and last division of Ulcers: viz, that
which is characterized by a Peculiarity of Action
This action may be either general or local as in
Syphilis, Scrofula or Cancer — 1st The diseased
action may sometime be so local that it may be
exterpated with the knife as in Cancer and Ranere

2dly There is an Ulcer with worm eaten edges which occurs in Syphilis after the Mercurial course has been continued for some time - This may be wholly extirpated with Caustic - 3dly When the Constitution is affected this must be cured first ——— .. ——— ..

Ascites

Ascites is a collection of water in the Cavity of the belly for which it is sometimes necessary to perform an operation called *paracentesis* - This operation is generally performed at the left side about half way between the superior anterior spinous process of the Ilium and the Navel - The left side is preferred for the purpose of avoiding the Liver - The Celebrated Mr Cline in performing this operation wounded the Epigastric ~~Artery~~ Artery and the patient was suffered to die of hemorrhagy, I say suffered, because he ought to have cut down to the bleeding vessel and secured it - This circumstance made him suspicious in operating at the side, he therefore proposed to make the opening about halfway between the Os Pubis and Navel — The

urine should always be evacuated previous to the operation — This operation is generally performed with a Trocheur, the stilett of which, some surgeons have made flat; this must be very inconvenient and requires a good deal of force to push the cannula into the belly — Others have the stilett triangular — It is always of the greatest consequence previously, whether the tumor be a collection of water or not — If the tumor contains water, it may generally be ascertained by the fluctuation — An actress who had been several times tapped for Ascites, believed herself to be affected with a return of the complaint and applied to a surgeon for relief; he seeing the ~~scars~~ scars where she was formerly tapped, plunged the Trocheur in at the same place and to his great astonishment no water followed — In about 3 days she died, and on examination, the wound was traced into the Uterus and the hip of the child with which she was impregnant — I generally perform the operation with a common Canuet which answers as well or better than a Trocheur, after the incision is

made, a female Catheter is to be introduced by which
the water will be evacuated — The patient sometimes
while the water is flowing or just after it is evac-
uated, faints; during the operation he should
drink wine or Brandy and water and a degree
of pressure made on the abdomen in order
to keep up the pressure which existed before as
well as to facilitate the flow of the water — In
some cases when the accumulation is very great
it will be proper to draw off only a part at a
time — When the water is all drawn off, the
Catheter is to be withdrawn and the edges of the
incision brought into contact and kept so
by adhesive plasters and compress over the
orifice — This being performed, pass a roller
round the belly in order to support it — ..

Burns and Scalds.

These occur very often in practice and it is of great importance that you make yourselves well acquainted with them — The effects of heat are varied according to the degree applied — 1st In the slightest effect the true skin is inflamed attended with a smarting pain — In the 2nd there is inflammation of the true skin, separation of the Cuticle with an effusion of serum underneath — In the 3rd the life of the part is destroyed, and an eschar is produced similar to that occasioned by Caustic — The heat of burning coals, hot metals, and vapours, will destroy organization — The effects will be varied by the situation or nature of the parts; for instance burns of the cavities of large joints, or on the head are always attended with more danger than in any other situation — The danger is generally less in young than in old persons; and in those labouring under dropsy, mortification is apt to supervene — The extent of surface will also vary the effects of burns — A deep burn of a narrow surface, is less dangerous than a shallow one of

of extensive surface; even death may take plaw in a very short time from a burn of an extensive surface — I remember a boy who in attempting to walk around the rim of a soap boiler, slipt and two thirds of his body was immersed in the hot water; it was some time before his clothes were got off; and when I saw him, he was insensible, with scarcely any pulse, and with cold extremities. He ~~swooned~~ survived but six hours — In this case the patient complained of no pain; and in every case where the life of a part is killed, as soon as the first impression is over, no complaint of pain is made for several days — When inflammation takes plare attended with a separation of the ~~skin~~ scar, ~~skin~~ shivering, fever delirium, mortification, and in one case I've known Tetanus to follow a burn of this kind — When the injuries are small, applications to the parts only, will be sufficient; but when the constitution suffers, the treatment must be more extensive — By most authors, the Antiphlogistic plan is recommended; but until symptoms

of inflammation had taken plan, I would not use it, and then it should be proportioned to the symptoms, Sometimes Burns are followed by depression of the pulse and absence of inflamation, in all which cases, wine, spirits, nourishing diet, Barks and Blisters, should be prescribed, together with Opium to relieve pain un-

til a due degree of inflammation is produced; by which suppuration will be established and the separation of the diseased parts effected - But always remember when inflammation run high even after these remedies have been given; that you must subdue it by bleeding, purging &c - The local remidies consist in, spirits, wine, Vinegar and water, holding the part to the fire - When the burn is slight cold water and ice; when the cuticle is detached oil or oil and lime water made into a liniment, lead water, Saturnine Cerate spread on rags, a bread & milk poultice; scraped potatoes with a table spoon full of common salt, have each be recommended - Of late, ointments of red

precipitate, Volatile Salt, and spirits of Turpentine have been employed each praised to the exclusion of the rest – Before I proceed to the selection of local remedies, I will make a few observations on the nature of burns – The disease produced by excessive heat, differs from all others 1st in the pain which is of a burning kind, 2nd in being difficult of resolution, but very easy to ulcerate under the skin, 3rd in the quantity of fungus and pus thrown up, which is greater than in any other case, 4th in the contraction of the Cicatrice, 5th Inasmuch as the remedies found most successful in its cure, would be extremely prejudicial in any other kind of inflammation; hence the utility of exciting a new action by the more stimulating substances, as spirits of wine, Vol: Alkali, spirits of Turpentine &c – Lime water, ice, lead water, cold water &c &c are only palliatives – Of all the remedies which I've tried, I greatly prefer ~~Spirits~~ Spirits of Turp: and Basilicon made into a salve this should be spread on small peices of lint and applied

immediately to the part, taking great care that none of it is applied to the sound part as it would excite inflammation and swelling in those parts — Even tho' two or three days have elapsed since the occurrence of the accident, still this application should be made; Where Fungus makes its appearance this ointment has succeeded in repressing it; but if it is found inadequate to prevent their growth, Escharotics must be employed — Sometimes it happens that parts which have been burned are destorted by adhesions forming between different parts and by the contraction of Cicatrices as for instance a burn in the palm of the hand will make a permanently closed fist; the skin and Steinum; forearm and humerus; leg and thigh, may be united in the same manner — These are accidents which may always be prevented by the Surgeon; if he will pay proper attention to keep the parts asunder by insinuating a bit of lint spread with cerate

between them. When the injury is over one of the joints, a splint should be applied so as to keep the parts at rest. Where the bone is situated in the elbow joint and from the nature of the injury and the appearance of the parts you are induced to apprehend an anchylose joint, it is proper to place the arm in that position which will cause it to be most useful to the patient; for that purpose, the fore arm should be bent, so as to form a right angle with the humerus.

Fractures

By a fracture is meant the solution of continuity in a bone, occasioned by external violence. They are generally occasioned by falls and blows, but sometimes by increased muscular action alone; Cases of which, in the Patella and Olecranon, are well known. It has been supposed that bones are more brittle in cold frosty weather; but I think it very improbable. The frequent occurrence of

of fractures at such times, may be explained by sup-
posing a greater number of muscles being brought
into action when we walk on ice, to-gether with the
increased velocity and gravity of the body in such
falls — When bones of the extremities are fractured,
the least motion produces pain and sometimes
convulsions in the adjacent muscles; the limb is
distorted from its natural shape and often con-
siderably shortened in consequence of the fractured
extremities being drawn so as to over lap each
other, by the surrounding muscles — By taking
hold of the limb, flexion may be produced at the
fractured part, and crepitation may be heard by
moving the fractured extremities upon each other —
Fractures are divided into <u>simple</u> and <u>compound</u>
In the first there is no external communication with
the cavity of the bone; which is always the case in
the former — When simple fractures are converted
into compound, it is called a Simple Comp-
ound — When compound fractures have only a

a small external opening, union by the first intention may take place, and thus be converted into a simple Fracture; instances of which, I've seen often — Sometimes the fragments of a bone may be so sharp as to divide the soft parts like a knife, and produce and mixed wound, in this case the parts will heal by the first intention, and the fracture be converted into a simple one

Simple Fractures

In these. all we have to do after ascertaining their existence, is to put the fractures ends exactly in apposition and retain them so by means of proper splints and bandages — If great pain and contraction of the surrounding muscles, should follow, they will generally cease on reduction of the fracture — Inflammation is to be kept down by bleeding and the antiphlogistic regimen — Much difficulty in the replacement of the fractured bones Seldom occurs — We have only to overcome the action of the muscles by moderate extension and counter extension, in general, but sometimes

acute inflammatory symptoms are

removed

this is insufficient and we have to resort to bleeding, which may be carried "ad deliquium animi", and then the reduction can be easely effected — Splints and bandages now become necessary to keep them in their proper position — Splints are hard bodies, to be applied outside the fractured limb, they should always be long enough to extend beyond the extremity of the limb — Splints are made of whale bone, thin board and pasteboard; the last is preferable, as by wetting it in warm water it can be made to accommodate itself to the shape of the limb — It sometimes happens that the Surgeon is not called in, until inflammation and swelling have taken place in consequence of injury, in this case, all attempts at reduction are improper — Our attempts should be to reduce those symtoms, by purging, bleeding &c. The best external application is a poultice of bread and milk with lead water — After the inflammatory Symtoms have subsided, we may then proceed to reduce the fracture and not before — Although I shall defer the Specific treatment until we come to speak of particular fractures, it will be proper to observe here as a general rule, that after 8 or 10 days we must examin the parts, in order to

acertain whether any displacement has occurred, that if so it may be rectified - Should much swelling occur, the bandages must be loosened, and never suffered to be so tight as to impede the circulation, in which event mortification would follow and the fracture turned into a compound one - I prefer Bleeding as the remidy to reduce inflammatory Symtoms, as purging exposes the patient to great pain and inconvenience, it will be sufficient to keep the bowels gently open - The time necessary for the reunion varies according to age, constitution, Seat & Seleration of the fracture - Less time is necessary in young than in old people - The jaw and ribs will unite Sooner than other bones - In cases where there is a communication with the cavity of a joint more time is required - Some older Surgeons were of opinion that the bones of pregnant women are less disposed to unite, but I see no rational foundation for this opinion - There are cases in which the joints will not unite, and a kind of joint is formed, admitting of partial flexion and extension; the ends become covered with cartilage Similar to the Capsule of a joint - The cured two cases of this kind by making the patients walk

and bear on their legs as much as possible - By this means slight inflammation is excited and union takes place - In such cases Mr. Hunter advises incision to be made down to the bone and some soft substance introduced between the ends of the bones so as to excite an action, but he never performed the operation - Boyer recommends the extremities of the bones to be made bare by an extensive incision; the parts of the extremities that project beyond one another are to be sawed off - The one case in which this operation was performed, and I have no hesitation in pronouncing it a dangerous, cruel and useless operation for the patient has finally to submit to amputation to prevent death from suppuration - Some years ago a man applied to me for assistance, I resolved to try Hunters mode with some improvement - This consisted in passing a needle armed with a seton between the fractured surfaces, with an intention of exciting irritation, suppuration granulations and consequently union between them; the arm was previously extended as much as possible, and the necessary incision made on each side of the bone: he suffered but little pain; lint was applied to the sores

on each side and ~~a~~ no inflammation of consequence followed - Splints were applied to keep the bones at rest and in their proper position - No alteration was appearant for 12 weeks; at this time he complained of some pain and the union then went on rapidly - The Seton was now removed and in a short time his arm was as pile as ever - Encouraged by this success, I again performed the operation on an old woman of 65 years old - In this case such distressing symtoms followed that I was obliged to remove the Seton, and not being able to see her again, in consequence of the distance at which she lives, the management was not properly conducted - I have since heard that she derives some advantage - I must observe that in order to make the seton effectual, it should remain in a longtime, particularly in old people, sometimes six, eight or twelve months - Simple fracture heal by the first intention or adhesive inflammation, the injuries done muscular fibres not communicating externally only they require more time to perfect the union

than the latter - The blood effused between the extremities becomes vascular, then cartilaginous and lastly osseous - In this way callous is formed, which sometimes enlarges them considerably, but differs little from the original bone -

Compound Fractures

In simple fractures, the ruptured vessels pour their contents on the broken surfaces which being confined stiffens and unites them by the first intention - The newformed callus is abundantly supplied with vessels, which disappear and then it differs little from bone - In compound fractures union by the first intention seldom takes place - 1st because the uniting medium is effused through the external wound and lost - 2nd From the inflammation which not only, in some instances, prevents union by the first intention, but produces mortification of the soft parts and kills a portion of the bone (for bones cannot bear excessive action) the whole of which

osseolicates; after which granulations sprout out from the surfaces of the sound bone — These granulations become long at their bases, which unite so as to connect the bones nearly as firmly as previous to the occurrence of the accident — Compound Fractures differ with respect to the wound which accompanies them — In some instances, when made by a sharp piece of bone, it resembles an incised wound — But generally it is punctured, lacerated or contused —

The punctured wound is generally small being made by a sharp pointed spicula of the bone —

The lacerated wound is made by the rugged fragments; and the contused wound by heavy bodies sticking against the part so as to fracture the bone & at the same time bruise the soft parts; this is by far the most dangerous kind —

These fractures may be either Transverse, Oblique or Longitudinal — Sometimes considerable hemorrhagy attends, and in these cases the tourniquet must be applied so as to restrain it until the bleeding vesils can be secured — In cases where

the bone is considerably shattered with much lacera-
tion of the soft parts, a question arises, whether it
is expedient to amputate or not — In general if the
parts be so much bruised and disorganized as to
prevent the circulation in the limb, amputation
should be immediately had recourse to — It has
been generally advise to amputate whenever the
hemorrhagy is so profuse as to endanger life, under
the impression that it cannot be restrained; but
there is scarcely an instance in which we cannot
command the hemorrhagy by proper management
Gooch relates a case in which the medullary
artery of the Tibia was wounded, of the size of
a quill, which bled very freely; he made two
perforations with the crown of the Trepan one
in the Tibia, which exposed the artery, and then
by making moderate pressure with dry lint,
the bleeding was stopped effectually — I never saw
a case of this kind, but it has long since occurred
to me that a small plug made of wood and
inserted into the canal, so as to make pressure
upon the artery; would be equally effectual

I once had an opportunity of trying this plug, after an amputation which was followed by a copious hemorrhage from the same artery, it was followed with complete success — The plug should be passed outside of the canal — If the bleeding vessel cannot be detected, it would be advisable to take up the principal artery of the limb, this I conceive much better than performing the amputation of the limb — Hay even cut out a portion of the Fibula which enabled him to secure the bleeding vessel with a needle — In other cases dilating with a scalpel will be effectual; when this is inadmissible, the method I mentioned in a former Lecture of ascertaining the situation of the artery with the finger and passing the needle under it is the proper way — sometimes it may be effected by inclosing a large portion of flesh within the ligature — By some of the foregoing means almost every case may be managed without resorting to amputation

in the stoppage of hemorrhagy — The 2nd cause calling for amputation is mortification — In this case the mortification and inflammation must be stopped previously; after this is effected nothing is required but to saw off the ~~the~~ bone and detach the putrid ~~parts~~ flesh, all the rest being effected by the absorbents — 3rd When Hectic is produced from excessive suppuration — 4th When the cavity of a joint is exposed and the bones much injured; in this case the sooner amputation is performed the better — Sometimes there is some probability of saving the limb by sawing off the ends of the bones; in these cases an anchylosed joint is the consequence — After we have succeeded in stopping the hemorrhagy, the next thing is to replace the bones — If a projecting bone be small and cannot be reduced to its proper place, we must remove it with a pair of bone nippers or a metacarpal saw — Dilating the wound much, is always improper as it increases the inflamation, and may have the effect of converting that into a compound, which would

otherwise have been a simple fracture — If the contraction of the muscles oppose the reduction of the fracture with much force, they must be relaxed by bloodletting, which may be carried ad "deliquium animi" — All extraneous matter and detached fragments must be removed if they can be conveniently got at; but all searching for them, so as to produce much pain ought sedulously to be avoided, as the danger is thereby greatly increased — I remember to have seen two old Surgeons engaged a considerable time in sawing off the ends of a fractured Tibia which projected out; and which they feared would keep up irritation, at the same time not reflecting that the operation they performed, actually caused considerably more irritation than the ends of the bones — The patient declared that he suffered more from the operation than from the accident itself — He died on the 3rd day afterwards. After the reduction of the fragments is ac-com-

- plished, we should endeavour to heal the parts by the first intention; if the external wound be small — For this purpose a Adhesive plaster or dry lint should be laid over the orifice so as to absorb the blood and by drying forms a scab so as to convert the Compound into a Simple Fracture This I've succeeded in effecting several times in cases where the wound was small — We should always guard against inflammation, which may be so great as to produce mortification of the soft parts, or else a profuse discharge — If there be too much action in the parts, the bone will exfoliate before restoration can proceed To prevent this, we must bleed and use the antiphlogistic regimen — All external applications must be of a mild nature; the best is milk and bread poultice, which is to be renewed twice a day — Surgeons generally are afraid of carrying evacuations to the proper extent, on account of the great prostration that may follow, forgetting that this prostration will always

Pain and spasms must be treated

by Opium & other antispasmodics

be in proportion to the preceding excitement, which should, therefore, be diminished — Barks and Wine are also prescribed to support the system under an excessive discharge of pus, supposing it to arise from debility in many instances, when in fact it arises from too much action and consequently will be increased by the medicine which they use to ~~Assist~~ suck it — After inflammation, however, has subsided and debility actually exists, then tonic medicines are used with great advantage — Mortification is to be treated with the usual remedies according to its nature ——"——

Particular Fractures

And first of

Fractures of the Nose

The nose is rarely broken in front, on account of its arched form and great strength in that position; but the sides are weaker and much more liable to be fractured: When this happens the fragments is depressed and pro—

-jected into the cavity of the nose, thereby impeding the passage of the air, altering the voice, and producing deformity— All we have to do is to raise the depressed portion, by introducing a common director into the nostril, passing upwards under it, by keeping the fingers on the outside, it can be elevated to its proper position externally very easily No bandage is necessary, we have only to defend it from injury, by adhesive plaster spread on a piece of leather and placed over it— This is the sum totum of the treatment when the fracture is a simple one; But when the parts are communicated, a probe with fine linen a tone end wrapped around it, must be passed up the nostril immediately under the fractures and permitted to remain there until inflammation takes place, at which time it must be drawn out, and adhesion of the parts will take place— Should there be much inflammation, suitable measures must be adopted— The bony union is generally perfect in three weeks ——— " ——— "

The Lower Jaw

The lower jaw is sometimes fractured at the Symphysis this generally at the sides - I have seen the body near the angle fractured, and the condyloid processes broken off, but never the coronoid, which is defended by the Zygomatic and temporal muscles - The existence of the fracture may be discovered by passing the fingers under the lower jaw, and by examining the teeth which will be irregular and uneven - If these be not sufficient diagnostics, it may be made certain by grasping the fore front of the jaw and moving it up and down, if there be a fracture crepitation will be produced - It not unfrequently happens that the teeth are loosened, and the one opposite the fracture, nearly pushed out of its socket - This should never be extracted, as is advised by some Surgeons, for this would convert a simple into a compound fracture - The extraction of the Tooth has sometimes produced

fungus, which shooting up from the socket, in some instances has grown so uncommonly large as to fill the mouth and by pressing on the cheek, produces mortification in it; the slightest touch causes it to bleed profusely, it is therefore necessary either to let the tooth alone, or to tie it to a sound one

The fragments are easily replaced, which may be known by inspecting the mouth, the teeth will be found level on that side – It is now only necessary to bring the lower jaw in contact with the upper one and apply a bandage to prevent the patients his mouth, which is done in the following manner – First carry the roller several times over the head and under the jaw, then round the head, forehead and occiput several times, and lastly around the chin and inferior part of the ~~occiput~~ occiput several times – Should there be any wound you need only apply some dry lint or adhesive plaster over it – When the condyle is broken it will push up under the zygoma; this is easily seen and the bandage is to be

applied as before — I saw a case not long since in which the jaw was broken at the symphysis and from the root of the condyloid process to the angle on one side, the condyle was broken off on the other, and the jaw split from between the alveolar process leaving the teeth on one side, in this case it was difficult to adjust all three parts, but by ~~applying~~ application of the bandage, the parts united and the patient experienced no inconvenience, nor was there any deformity — In all cases where the jaw is fractured, the patient is to be restrained on liquid — which he is to take between the teeth —"

Fractures of the Vertebræ

Fractures of the Vertebræ are occasioned by the descent of heavy bodies, falls, and bullets sometimes also produce them — If only the processes are fractured the patient experiences no inconvenience, but when the cavity of the body is broken so that the Medulla Spinalis is compressed, palsy of all the parts below succeeds —

I never saw a case unattended with a displacement of the fragments, which were forced in upon the Spinal Marrow— The effusion of blood may be another cause of compression by collecting in the Spinal canal, especially in the cervical Vertebræ — In general little can be done in these cases— I once endeavoured to take off the pressure by permanent extension, which the effect of enabling the patient to raise his arm a little, but it was productive of no permanent advantage; he died on the third day— Patients scarcely ever live more than four or five days in such cases— When the fracture is in the Dorsal Vertebræ they may live five or six months or longer, but it is not desirable, as they never recove and they suffer extremely before death— There is always a retention of Urine which must be relieved by introducing the Catheter twice or thrice a day— The faces also are retained or passed involuntarily, in the latter case a hole should be cut in the mattrass corresponding to the buttox, and a bed-pan placed beneath— I would observe that you should never turn a patient on his belly to examine, as in that state he will die under your hands, because respiration is carried on by the diaphragm the intercostal and abdominal muscles are paralyzed

When the patient is turned on his belly, the bowels are pressed up against the diaphram preventing its descent, and consequently respiration is immediately stopped — In order to examine, the patient should be placed on his back — A patient which I had under my care some years ago appeared to die from mucous collecting in the Trachea, which he was unable to expectorate —

Fractures of the Ribs

The take place frequently from violence directly applied to the rib causing it to give way at that place — Fractures generally take place about the middle of the rib — The symptoms sometimes are obscure but generally a pinching sensation in the elevation and depression of the rib in respiration; cough, and when the lungs are perforated, a mucus matter streaked with blood is coughed up — The fragments are seldom much displaced upwards or downwards, owing to the firm articulation with the sternum & Spine: lateral displacement may however occur — Besides the symptoms mentioned if the Surgeon will place both his hands on the Thorax of the patient, one on each side, and desires him to cough, he will ascertain whether a fracture exists, by an obvious expectation

The only treatment necessary is to pass a broad roller round the thorax, moderately tight, this has the effect of keeping the ribs steady by preventing their elevation or depression, which is constantly going on in respiration — The diaphragm alone carries on the process of respiration in this case — In examining the parts in some cases, you may distinctly hear air rushing out from the lungs into the Cellular membrane; in most cases it is so circumscribed as to demand but little attention, and can be discussed by applying a compress wet with brandy — It sometimes happens that the whole Cellular membrane becomes distended — This arises from a fragment of the rib perforating the lungs, by which air is let into the cavity of the Pleurae, and from them, in expiration it is forced thro' the punctured pleura Costalis into the contiguous cellular membrane, and by successive expiration throughout the whole body — In this case we must puncture the side between the ribs to afford an outlet for the air — The puncture should be made about midway between the Sternum and Spine; the puncture should never be made between the fractured ribs — In some cases a troublesome cough attends, which may be removed by the use of demulcient

drinks, with a small portion of an emetic and opium combined - A solution of Gum Arabic, a little Laudanum and a few drops of Antimonial wine is an excellent remidy -

Fractures of the Superior Extremities

And First of the

Scapula

Fractures of the Scapula very rarely take place - I have but one case below the dorsum and that was the inferior angle - In that case there was much difficulty in rotating the arm, there was great pain, when it was attempted, in the back part of the Scapula - By applying my hand to the part during the operation crepitation was very perceptible - The angle was drawn downwards and forwards by the ~~[illegible]~~ Serratus major anticus, which was so powerful, that the only way the parts could be brought into apposition, was by pushing the upper part of the Scapula down to it - The arm was move out from the body and then brought to the side of the chest, with the fore-arm oblique by on the breast and the hand to the side of the axilla - A small pad must be placed in the arm pit and secured, by a

circular roller, passing around the chest and carried over 2 ways
the arm -

Acromion and Clavicle

The Acromion is sometimes fractured directly across, in which case it may be discovered by passing the fingers over the skin, which being very thin at that part, admits of the easy perception of the fractured parts, which are always drawn down by the action of the Deltoid muscle - The reduction can be easily accomplished by pushing the arm directly upwards; and confining it by means of a bandage passed round the elbow and Shoulder, to support the weight of the arm - The bandage should be kept on at least Six weeks, a longer time is sometimes necessary. The "Coracoid process" is rarely ever broken, though it might happen in gun shot wounds - The Clavicle is more frequently broken than any bony in the body - The fracture generally takes place about the middle of the bone, and obliquely from the Scapula to the Sternum, sometimes it takes place near the Sternum, at other times near the Scapulae, and transverse as well as oblique - When it exists in the middle and sloping from the Scapula towards the Sternum, the Scapulary

The patient complains of pain at the [illegible]
by pressing the fragments of the clavicle together
each other a crepitation is produced

And occasions excoriation of the
cover fold of the axilla—

fragment will be drawn downwards by the weight of the arm, and downwards by the action of the pectoralis muscle when the fracture takes place at that part where the tendon are attached reuning from the coranoid procss, there is no displacement; nor when it takes place at any point between that insertion and the acromion — The patient is unable to raise his arm, he keeps his body bent, supports the affected arm with the sound one, and if he can get to a table leans the elbow on it — These fractures can easily be destinguished by the finger or crepitation — The treatment recommended by Desault is the best which ever been adopted — The English Surgeons recommend placing the knee against the patients back, pull the shoulder backward and apply a bandage in the form of a figure 8, but we find as soon as the knee is withdrawn the bone returns, and no good is done — Desaults consists in a pad applied in the axilla, so as to counteract the action of the pectoralis muscle and keep the arm out from the body, this pad is to be secured by repeated turns of a roller round the body; 2 a roller applied over, by commencing at the shoulder and continueing it down to the elbow; it is to be

A It began at the sound arm, goes round
the elbow of the arm of the broken Clam
comes up over the shoulder

applied rather loosely above and tighter in its descent—
2nd another bandage applied in the form of a triangle, to prevent lateral displacement and to keep the shoulder elevated
A sling is to support the weight of the arm, by being passed round the Specke— The bandages are to be connected and kept in place by means of stitches or pins— The parts should be examined every day, in order that we may correct any displacement that may happen—. After the application of the apparatus the pulse should be felt and if the artery should be compressed the bandages should be loosened—

The Os Humeri.

The Os Humeri is most frequently fractured at the middle or just above— These fractures are generally ~~transverse~~ oblique, but sometimes ~~oblique~~ transverse; there is seldom much displacement, but when it does take place, the lower fragment is generally drawn upwards— The existence of this fracture is easily detected by the bending of the humerous at the place of fracture great pain in attempting to move the limb; and the crepitation that is obvious to the Surgeon by rubbing the extremities against each other—

In order to accomplish the reduction extension and counter-extension are necessary— The first is done by an assistant grasping the humerus above the condyles and pulling it from the body, and the second, by another assistant, taking hold of the shoulder and pulling it in a contrary direction, or by standing on the sound side of the patient, he may pass both arms round him and make counter extension from the armpit of the affected side—

A circular roller is now to be placed, on the humerus by the Surgeon, reaching from the hand to the shoulder to prevent Oedematous swelling, which would otherwise attend— Three splints reaching from the shoulder to the elbow are to be applied— One anteriorly, one on the inside and one posteriorly and confined by ~~same~~ the same roller brought down from the shoulder to the condyles— A broad circular bandage encircling the breast and passing over the humerus so as to confine it to the side, & over the forearm which is to be laid transverse by along the breast, will answer much better than a sling to support the arm; lay a napkin

before you apply the last bandage, between the forearm and breast and connect the different turns of the roller, with stitches — Four or five weeks are necessary to complete the union of the bones; the parts should be examined in eight or ten days, to ascertain whether the parts preserve their proper position — The fracture sometimes takes place at the upper extremity near the neck of the bone; in this case its existence is not so easily ascertained, and if very high up, will be distinguished with difficulty — In general the lower fragment is drawn downwards and inwards towards the Thorax, while the upper one remains stationary — There is always a depression just under the joint of the shoulder, making the case resemble a luxation, from which, however, it can always be distinguished, by the depression being below the joint of the shoulder, and not so near the acromium — By placing the fingers in the axilla, you can generally perceive the sharp end of the inferior fragments pressure on which will occasion great pain and if you grasp the lower end of the humerus

you may move it on the upper fragment so as to pro-
duce crepitation, which is an infallible proof It is of the
greatest importance to distinguish it from luxation
for the irritation ~~caused~~ induced by indeavouring to
reduce luxation would produce violent inflammation
and suppuration of the soft parts — It seldom happens
that the lower fragment is much displaced and
hence arises the difficulty of ascertaining the existence
of the fracture at first, but by an assistant grasping
the tendons just above the condyle and ex-
tending it, while you endeavour to rub the
fragments each on the other with your hands
or give a rotatory motion to the inferior fragm-
ent, it will be rendered sufficiently obvious —
When the existence of the fracture is ascertained,
you must proceed to replace the bones in the ma-
nner described in the former lecture; when this
is accomplished, the dressings are to be 1st a Bol-
ster composed of several layers of linen of a square
form and equal thickness, is to be applied imm-
ediately under the arm and secured by a

roller passed frequently round the body — 2nd & circular bandages applied round the arm as before, 3rd — Three splints are to be applied, anteriorly, posteriorly and in the middle, these splints are to extend above the scapula, so as to have an indirect effect on the os humeri by keeping the scapula at rest; these are to be secured by a roller; the arm is to be kept at rest by a bandage passing round it and the body and by means of a sling — In 5 or 6 weeks the union may be completed, and though a stiffness may remain sometimes afterwards in raising the arm and in the act of throwing, yet this should not discourage the Surgeon as it is owing to contusion of the deltoid muscle, in consequence of violence committed directly on shoulder — In all cases of injury done near the head of the os humeri, attended with ecchymoses, we may expect a fracture of the head, which can only be fully ascertained by putting the fingers in the axilla and feeling for the

point of the fragment — Desault relates a case of this kind in which he opened the tumour to ~~let out the~~ coagulated blood — For the particulars I refer you to his treatise on Surgery — But will only remark that it is improper to perform such an operation, as the extravasated blood, if suffered to remain would do no harm and might in time be absorbed; at any rate after the union of the bone, a small opening might be made with the point of a sharp lancet, sufficiently large to allow the escape of the extravasated blood, and no danger incurred of converting a simple into a compound fracture, which would be the case by following the plan of Desault — It was 12 months before his patient recovered and he was then unfit for labour — The lower extremity of the Humerus may also be fractured; which may be simply transverse or longitudinally transverse, with a separation of the condyles — Sometimes one of the condyles only is broken off — The arm is found to bend easily above the condyles, and crepitation may be produced

Sometimes the Olecranon is fractured in this case the patient cannot extend the arm; is ascertained by taking hold of it and moving it from side to side a crepitation will be produced; it is to be placed in its natural position

by moving them upon each other – If only one is broken off that can be moved while the other remains fixed – all these fractures require but one mode of treatment – The arm is to be bent; if the fragments are much displaced (which seldom happens) a little extension will replace them – A circular roller is to be applied from the wrist, to the shoulder – Splints are to be applied of a rectangular shape, so as to fit the elbow when fixed; one on the inside, extending from below the shoulder to the ends of the fingers; another on the outside, a third above the radius, and a fourth above the Ulna – All are to be secured by the same roller – The arm is to be supported by a ~~sling~~ sling

The necessity for these long splints, arises from the shortness of the lower fragment, which could not be retained in its place by a splint applied only to the humerus; which would move upon the slightest motion, producing an artificial joint instead of the union of the parts ——.——.——.

The Fore Arm

Sometimes the bones are broken and directly opposite, producing an angular projection at the spot; this renders the accident very obvious. Should this, however, not appear, it can very readily be beten an angular form by the Surgeon, and the bones made to ~~~ It rarely happens that any difference in length is produced, but transversely they are altered by the approximation of the ends of the lower or carpal fragment, in this way causing an angle — In the reduction slight extension and counter extension will generally suffice to replace the fragments — The first is to be done by an assistant taking hold of the hand in the manner of shaking hands; the second by an other assistant taking hold of the humerus just above the condyles; the ends are now to be adjusted by the Surgeon, and by squeezing the muscles on the fore part of the arm, between the bones, so as to separate any approximation of the fragments

towards each other— a circular bandage is now to be loosely applied (so as not to force the extremeties together again) from wrist to elbow— Over this two splints broader than the arm (to prevent the bones pressing each other when the roller is applied) these splints are not to be soaked and should extend from the elbow joint to the ends of the fingers, before & behind; these must be confined by the roller in its descent. The arm is now to be supported with a sling— Desault recommends splints extending no lower than the wrist, but as some motion is allowed the hand becomes prone supine during the union of the bones, and ever afterwards the patient looses the power of rotating the hand. Another reason is that some displacement of the fragments would be occasioned and consequently irritation, which it is necessary to avoid as much as possible ——.

Radius and Ulna

The ulna is rarely broken alone, but when it is, it always happens in consequence of violence done immediately to it; as raising up the arm in order to fend off a blow— The radius is frequently broken, just above the wrist, the fragments making an angular projection forwards; and a displacement occurs immediately at the place of accident— It is easely distinguished from a luxation of the wrist, by feeling the joint below; by the ease with which the bones may be made to move backwards and forwards at the point of fracture, and by the ease with which the deformity can be removed and the fragments replaced with moderate extension— The same splints are here requisite, as was necessary when both bones were fractured— Union takes place in four or five weeks — .. — .. — ..

The Olecranon

Fractures of the Olecranon generally takes place in consequence of falls on the Elbow, and are generally transverse — The patient is unable to extend the arm in consequence of the Triceps muscle loosing its point of insertion — The skin is so thin that the existence of the accident is easily detected — The Olecranon can be moved from side to side and crepitation perceived — The dressings consists in a circular bandage applied from the shoulder to the wrist and a long splint extending the same distance applied over it and confined by the same bandage or rollers — These should remain 15 or 20 days, after which term they should be removed every day and the arm flexed to prevent stiffness; at the end of 3 weeks from the time the dressings are first removed, union generally takes place — When the Metacarpal

A, also a small piece of board carried out
so that the fingers and thumb may be
adapted to it - Sometimes there is com-
bined fracture of the fingers where there
is a laceration of the flesh; here the friends
think it best that it should be cut off -
The treatment - after removing the dirt and
all extraneous matter, the ends of the bones are
to be put in apposition and then the soft
parts are to be united by sutures or plaster

Bones are fractured, there is an angular projection on the posterior part of the hand, and the fracture can be more certainly ascertained by examination — In these fractures, the only dressing necessary after the reduction, is to apply a bandage around the hand, and a large splint or shingle should be placed on the inside to prevent the motion of the hand — It is necessary to apply a small compress on the under part of the hand to fill up the cavity — Union will generally take place in 4 weeks — Fractures of the fingers require similar treatment; the ~~assistant~~ splint is to be as large as in the former case — " — " — " —

The Inferior Extremities and Shaft of The Thigh

The Os Femoris is most frequently broken at the middle and sometimes lower down

The splints and bandages are to be the same as those I have mentioned (page 303)

A. This owing to the weight of the limb

Fractures in the middle are generally oblique
tho' sometimes transverse — The thigh is easily
bent and severe pain is felt when motion is
given to the limb — On examination (except
in transverse fractures and where the fragments
are interlocked) the limb will be found shor-
tened from one to two inches — The foot is turn-
ed outwards (and rarely inwards); by ro-
tating the foot crepitation is produced — The
lower fragment may be drawn upwards
by the action of the muscles on the thigh —
An angular projection may be perceived
at the fractured spot, and sometimes the
surrounding muscles will be thrown into convulsi-
-ons by the slightest irritation — Generally the
reduction is effected without much difficulty —
Counter extension is to be applied at the pelvis
and extension [illegible] by grasping the
ankle just above the foot, by which the flexor
muscles are counteracted, and their resistance to

replacement, withdrawn — After the bones are adjusted the method of retaining them in their place is next to be considered — Various means have been recommended for this purpose; but they generally have grown into disuse; and I shall not detain you with a enumeration of them; I must, however, make some observations on the mode recommended by Mr Pott, which consisted in laying the patient on his side, with his thigh bent on the pelvis, and his leg on the thigh, so as to produce general relaxation of the muscles — However reasonable this may appear there are powerful objections to it, 1st the patient is so uncomfortably situated that he cannot remain in this position more than 24 hours; he turns on his back to relieve the uneasiness which his side position subjected him to, and thus deranges the parts — 2nd The Surgeon has no opportunity of examining whether the

parts be in opposition or not, for as the examination depends in a great measure on comparing the length of the two limbs, it will entirely be prevented by the position of the patient — It is said that the muscles are thrown into a greater degree of tension by lying on the back, and that the patient is more uneasy, but this I know is incorrect — During the first days, any position is uneasy, but afterwards this position becomes more agreeable and the patient prefers it to the other. This I saw sufficiently proved in the case of a boy in St Georges Hospital who was treated in both ways in consequence of renewing the fracture before he entirely got well; he declared that the position on his back was far preferable. This we may also infer by the greater number of points on which the body rested — It has been suggested to us the bent position of the leg and thigh in the back position, but the limb will be disturbed when the patient

uses the bed pan, and the fragments will be displaced, nor is it possible to keep them in apposition — Mr Earle advises a curious and ingenious bed, for obviating these disadvantages, but as it cannot always be procured, the following will be found to possess all its advantages, without any of its inconveniences — It is the method recommended by Desault (by which the extension and counter extension are rendered permanent) with a few improvements by myself and Dr Hutchinson — That the body may have a firm support, the patient is to be laid on a mattress, supported by boards (and not sacking bottom) which will prevent his body from sinking — Only one pillar should be used under his head, as by raising the head too much, the body will be made to descend and the feet will project beyond the foot of the bed On this mattress some of the dressings are to be laid previous to the patients being placed upon it, 1st four tapes to confine the splints two for the thigh and two for the leg — Then a broad bean-

A Section of the outside of the top of the Petrous
bone according to the plan of Desault-
reading to the Description communicated
by Dr Physick

-dage, to go around the pelvis, next a junk cloth
to enclose the splints and assist in securing them;
then a splint of pasteboard for the back of the thigh
then 12 strips (or more) to surround the thigh in
its whole length, overlapping each other about two
thirds of their breadth, and their extremities to decap-
ate each other in applying them around the thigh
Then a silk handkerchief for the counter extending
bandage, and the splints and junk at a small dis-
tance off. — The patient is now to be laid on this appa-
ratus; extension is to be made by an assistant gras-
ping the ankle, and counter extension by another
seizing the hips; this must be continued until the
surgeon lays on the strips; the counter extending
bandage applied to the upper end of the long
splint, that reaches from the armpit to below
the foot; having double mortises at each end,
thro' which the extremities of the counter extending
and extending bandages are to pass, and be tied

and be tied on the outside — Another small handkerchief to be applied previously to the foot making a circular turn round the ankle then decussating on the instep and carried under the sole of the foot, where it is to be tied in a firm knot and afterwards carried thro' a notch in Hutchinsons Block, and lastly the two ends thro' the other double mortises and tied outside the splint. This block is to prevent the bandage from drawing the foot too much outwards — The long splint must also be rolled up in the junta cloth before it is applied — The second splint must now be laid on, extending from the groin to the foot on the inside, rolled up in the same cloth — The junta must next be laid between the interstices; and the third splint, on the top of the thigh, reaching only to the knee; after fixing the junta, all these are to be secured by tying the tapes — The broad bandage must be applied round the pelvis to

confine the long splint there and to prevent
this from slipping up, a short bandage is to be applied
on the sound side under the thigh and above the
and pinned to the counterextending bandage
Desaults long splint only reaches to the crista of
the Ilium, which draws the thigh too much
outwards and is apt to cause excoriation of the peri-
naeum - By having the splints long and a notch
at the upper end to fit the axilla pit covered with
flannel; the force is divided between the axil-
pit and pelvis, and exerted more in a line with
the thigh - It will be necessary to examine
the bandages every day, to rectify any displace-
ment of the fragments occasioned by relaxation
of the bandages - Care should be taken not
to extend the limb to the utmost at the first
dressing; for such violent stretchings would
irritate and inflame the soft parts - Moderate
extension will be sufficient for the first
time; this may be increased at each succe-

ding dressing, until the resistance of the muscles are completely overcome — In this way you can entirely obviate the inflammation, excoriation and obstructed circulation which sometimes occur — I can recommend this mode of treatment to you with the utmost confidence, as I have had repeated instances of its correctness and efficacy — The Femore is sometimes fractured at its neck producing a separation of its head; in some cases where this takes place, the patient is sensible of a cracking at the moment the accident takes place, and becomes unable to raise or extend the thigh and leg — A shortening sometimes takes place to the extent of one or two inches; the foot rests on the outside — By extending the leg we can pull down the thigh to its proper length and by so doing crepitation will be produced — If the Surgeon turns the foot outwards so as to rotate the thigh at the same time he applies his hand to the great trochanters; he will perceive that the trochanter moves on its own

axis. (as on a pivot instead of describing an arch, as it ought to do) whose radius is the neck of the femur or the distance from the acetabulum to the trochanter major — This fracture may resemble luxation in which the head of the bone is forced upwards and backwards, or upwards and forwards — In the joint the foot is turned inwards and immoveable but in the fracture of the foot it is generally outwards and moveable — Another distinction is, that great extension is generally necessary (in dislocations) to restore the length of the limb, which is not the case in fractures except when the muscles exert muscular force — Sometimes the fragments are so interlocked that there is little or no displacement, and the patient has even walked after the accident — This is a rare occurrence and will teach us not to be too precipitate in deciding — However, when our doubts are not satisfied it is best to apply the apparatus, as it can do no harm if there is no fracture and in any

save much mischief in the event of one.
The apparatus already described is to be used—It will
be safest not to remove the dressing entirely or let the patient
walk in less than three months—Sometimes the fracture
heals very readily, but when it is situated high up or with-
in the Capsular ligament, union is very difficult—In one
case that came under my notice, I found, on examination
after death, that the whole neck was wanting, being remov-
ed by the absorbents—There was a cartilaginous union betw-
een the fragments and the great trochanter united firmly
to the tuber of the Ischii, the os Ischium had formed a
sort of Acetabulum for the Trochanter by which the pati-
ent was able to bear considerable weight upon the limb.
Some contusion may bear marks of fractures or dislo-
cations of the head of the bone—It is always highly impor-
tant that we should distinguish these in every instance,
which may be done by comparing the length of the limbs;
lay the patient on his back, and make the pelvis straight
so that a line drawn from one anterior superior Spinous
process to the other may cut the Spine at right angles,
and then any difference in the length of the limbs be

readily perceive — In contusion there will be none at all unless the patient be deformed — The Femur is sometimes fractured at its lowest extremity just above the condyles — This is generaly obliquely upwards and backwards from below — The same apparatus is requisite here also; but as the weight of the limb is apt to pull down the lower fragment which will irritate the surrounding muscles and tendons / this must be obviated by placing pillows under the leg to support its weight — I once saw a case of the seperation of the condyles by a longitudinal fracture of the lowest extremity in a maniac who jumped out of a window of the Hospital — He lived but three days — In all these cases our treatment should be the same with the addition of compresses at the sides to keep the fragments in apposition —

Fractures of the Patella

These most frequently happen in consequence of muscular action and generaly take place in a transverse direction, tho' sometimes obliquely and longitudinally when occasioned by external violence — The patient

falls immediately after the accident and is unable to get up; when placed on his feet he finds it impossible to move forwards, but can move backwards by dragging the injured limb — The seperation of the fragments is also generally visible — A circular roller, beginning at the ankle is to be carried up to the thigh, leaving the Knee uncovered That position is to be observed, by which the extensor muscles are most relaxed, in order that the upper fragment may be made to descend to the lower — In order to effect this the body is to be bent in the middle and the leg elevated by pillows — The superior fragment is now to be pulled down with the fingers; the skin is to be forcibly drawn with it so as to make a depression just above, in which depression a compress must be laid and confined by a roller passing over it and below the Knee, several times descending under the ham and leaving the top bare, which must, lastly be covered by the same roller to prevent tumefaction — To keep up extension of the leg, a splint is to be applied to the posterior part of the leg reaching from the tuberosity of

of the Ischium to the heel; leaving a junk between it and the limb. Union will take place in eight weeks; the same treatment is required in oblique fractures, but in longitudinal it will be necessary to place a compress on each side of the knee and secured by a roller — It seldom happens that bony union takes place in fractures of the patella, but instead there of a ligament is formed, which answers every purpose — It is an object with the surgeon to render this ligament as short as possible, for if it is 2 or 3 inches long, the upper fragment will be pushed upon the thigh and the motion of the joint is much impaired — When this takes place the motion of the joint may be much accelerated by causing the patient to lay on a table and bend it every day —— " —— " —— " —— "

Tibia and Fibula

These bones are both frequent broken about the middle or a little below; the fractures are generally transverse and sometimes oblique. The existence of this fracture is easily ascertained, thro' the thin skin of the Tibia, the fissure being very perceptible; there is generally displacement of the lower fragment, producing an angular projection before. Crepitation may also be produced by extending the fragments; during which considerable pain will be felt by the patient. In the treatment a pillow is to be laid on a mattress and on this one or two strips of Pasteboard; next 12 or 13 strips, two inches wide, overlapping each other. The patient is now to be placed on this and extension and counter extension made by assistants, one grasping the leg just below the knee for counter extension, while another grasps the foot with one hand on the heel and the other on the instep for extension. This will bring the bones in apposition, and then the splints

are to be applied; after these, two splints of pasteboard previously soaked in warm water and bent to fit the sides of the limb; these should extend to the soles of the foot, to preclude all motion of the ankle and confined by the tapes — Next two boards placed outside of the pillow, one along each side of the leg and confined by tapes; lastly a roller beginning at the upper end of the pillow or one side, carried down across the ankle around the instep, by one or two turns, and then to the upper end of the ~~pillow~~ opposite side of the pillow and pinned; this is to keep the foot steady — Sometimes the fracture is oblique and the lower fragment is drawn upwards, by the action of the muscles, in these cases Desaults splint improved by Hutchinson must be used to keep up permanent ~~ext~~ extension — This is to be applied as in fractures of the Humerus — When the Tibia only is fractured the Fibula serves as a splint; there is generally not much displacement; pain is felt in the lower part of the leg, and crepitation may be

4 inches from the ankle joint -

produced by grasping the lower fragment and rubbing it against the upper one — After you have ascertained the existence of the fracture; the same treatment is to be observed as when both bones are fractured — The Fibula may also be broken alone; this is generally occasioned by forcible abduction of the foot as in falls &c — It commonly gives way about one third of its length from the knee — In these cases the astragalus is pushed outwards and rests on the external side of the articulating surface of the Tibia producing a depression of the lower end of the fragment — Extension is to be made by an assistant placing one hand on the instep and the other on the heal, and counterextension by another assistant pressing the leg below the knee; the fragments may be reinstated and luxation reduced at the same time — The same dressings are required as in the former only that the splint should be broad and extend below the foot, to prevent all motion — In applying the bandages, care should be taken not to make them too tight for the

same reason as in the fracture of the fore arm fig. that the ends of the bones may not press against each other — See M^c Cats work —

Fractures of the Foot

Fractures of the foot are to be treated in the same way as those of the hands — It may be necessary to say something here, respecting fractures which have been neglected and which produce deformity in consequence of such neglect — The older Surgeons used to refracture the bones in such cases and then treat them in a proper manner, in justification of which practice the following case may serve — A Child fractured the Radius, which escaped the notice of its parents and the bones were suffered to unite in that situation, producing great deformity — In three weeks after the accident the Parents discovered it and I was consulted, I first endeavoured to restore the shape by splints, as the uniting substance was still yield-

ing; the parents not being satisfied, I treated the bone in the same spot, by proper dressings the arm was restored to its proper shape — This I think might be done in fractures of the thigh, where from improper treatment it exhibits almost an Elbow curvature only — But when the uniting medium is soft, it will be proper first to try splints —

Luxations

When one of the articulating surfaces is forcibly displaced it is called a dislocation; the motion of the joint is impeded or lost, great pain is experienced, with an alteration of the joint as respects its shape — Immediately after the occurrence of the accident, the reduction is very easy; but when several weeks have elapsed, it is sometimes difficult and even impossible —

The resistance which now takes place, is owing to the violent involuntary contraction of the muscles, occasioned by constant irritation —

The rupture of the capsular ligament, does

I prefer a number of assistants in reducing Luxatio
because you have then Power completely under your
command -

not afford much resistence, except in cases of long
duration — Low diet, moderate bleeding, purging,
warm bath, Opium and intoxication have been
advised in order to facilitate reduction — Mecha-
nical powers are sometimes necessary, but the
most effectual is bleeding "ad deliquium animi"
in which case, all impediments are completely
removed — The bone, in some instances, forms
a connection with the surrounding parts, pro-
bably the Cellula Membrane and the Capsula-
ligament contract around it, and thus increase
the difficulty of reduction — These neglected
luxations require force, which is best applied
by means of pullies, taking care at the same
time that they exert their force on that joint
only and at the same time to keep the surround-
ing muscles in complete relaxation, in these
case bleeding is sometimes also necessary — I come
now to speak of particular luxations and
first ——— " ——— " ——— "

Of the Jaw

The jaw is always luxated directly forwards, which is generally induced by opening the mouth too wide, as in yawning — I recollect a woman, who in scolding her husband vociferated so loudly that her mouth was thrown open so wide as to produce a luxation — One or both condyles may be luxated; the displacement is produced by the condyles passing over the tubercle at the root of the Zygoma, which prevents its return — It is easy to replace it, immediately after it has occurred; by placing the thumbs on the molar teeth, with the fingers under the chin pressed upwards thus elevating the jaw — The thumb should be secured by a towel to prevent injury by the sudden closing of the jaws ——.—.—

——.——.——.

If the accident is not treated correctly in the first instance or if it is neglected for some time then the cure is very difficult and almost impossible ——

I have never seen Luxation of the Vertebræ without being attended with fracture and this I have already spoken —

Be careful to keep the bandages tight —

The Clavicle

This dislocation but rarely happens — The humeral extremity is more frequently displaced than the Sternal — In the Sternal luxation, the extremity is pushed outwards causing a protuberance at the Sternum, by which it is generally known — The shoulder is pulled downwards by the weight of the arm — It is caused by falls on the points of the shoulder, the scapulary extremity is displaced also the deltoideum, which can easily be reduced by pushing up the arm — The same treatment is requisite here as in fractures of the Clavicle, to keep the shoulder upwards and outwards — The dressings must be continued 2 months at least, as the fragments will not unite sooner — I have never seen a luxation of the neck, except when accompanied with fracture, as cases however, are related, I refer you to authors who have treated of them, especially Boyer ——.——.——.

The Os Humeri

The most frequent luxation of this bone, is that in the shoulder joint. It may take place either directly downwards and backwards or inwards or with the head pushed directly forwards, between the coronoid process and anterior edge of the glenoid cavity. Of this last, I've seen only one case; the most frequent is downwards & for inwards, or with the head pushed behind the pectoral muscle and loged there. In this case the patient will be unable to carry the elbow of that arm to his side and a considerable ~~flat~~ depression will be perceived immediately under the Acromion, in consequence of the head of the bone being removed into the Axilla; by pressing with the fingers in the axilla, the head of the bone may be felt as it make a considerable tumour there. All rotation and voluntary motion of the arm is destroyed. By these symptoms, the nature of the injury may be always ascertained. I observed formerly

that the fracture of the neck of the bone, may be easily distinguished, by feeling the sharp points of the fragments, in the axilla, and by the depression considerably below the Acomion — When I've been called immediately after the accident, I've succeeded in removing the displacement by pressure with one hand against the acomion, for Counterextension, and at the same time grasping the arm just above the elbow for extension; taking care always to keep the elbow flexed, so as to relax the biceps Muscle — If sometime has elapsed, considerable force is necessary, to this purpose, 1st a piece of soft leather about 6 inches ~~ten~~ square, should be wrapped around the arm, to prevent excoriation; over this a strong towel is to be applied (round the braceaurus just above the elbow joint) by which one or more assistants may make extension; Another assistant standing on the opposite side of the patient, presses the acromion backwards, with his fingers placed in the depression below

a third assistant aids him by standing on the affected side and pushing in the same direction — The surgeon, with one hand applied under the Os humeri, after a sufficient extension has been made, must by suddenly pushing ~~elevating~~ the arm, downwards to the body reinstate the counter extension applied to the Scapula is indispensible, for if this be neglected, the arm may be torn off without effecting the reduction — I've heard of several cases in which six or eight men were employed in counter extension applied around the chest, and all their efforts to effect a reduction were ineffectual — The counter extension should always be equal to the extension, if two are employed in the one two should be employed in the other &c — Should all these efforts fail, we must bleed the patient "ad deliquium animi" after which the reduction will be generally easily accomplished — A man with a luxation of the "Os Humeri" ~~was~~ of three weeks standing, was admitted into the Hospital; all our efforts at reduction proved ineffectual,

notwithstanding I had a number of assistants; after bleeding in the manner just mentioned, I reduced it alone, with great ease. This mode is preferable to using much force, as it saves the patient much pain and irritation. After 5 or 6 weeks have elapsed before the reduction and the muscles have lost their involuntary contraction, and the bone has formed adhesions with the surrounding parts, it will become necessary to break these adhesions. In many cases however by increasing the number of the assistants, and placing them at proper distances, the extending bandage will answer. A strap is to be applied over the acromion for counter extension, and fastened to a staple in the floor or in the wall. The extension is to be made as before directed. Dr. Dorsey has made an invention for keeping the counter-extending bandage from slipping, and thereby causing excoriation; it consists of two pieces of bandage, applied cross (one on each side) the counter extending bandage and held below by an assist-

-ant — By these means I've seldom failed even
after 6 or 9 Weeks have elapsed, and in one case
after 14 Weeks — In two cases I've failed where there
were of two months standing, in one of these the
patient refused a repetition of the trial — The French
and English Surgeons never advise an attempt
at reduction after 4 or 5 Weeks have elapsed; but
I can see no reason for not attempting it a year
afterwards for I should think it would be easier to
remove a bone from its unnatural than from its
natural position — Mr Heusie of Baltimore suc-
-ceeded in a case of 5 Months standing with
perfect ease after bleeding "ad deliquium animi" —

The Elbow

The elbow is never luxated forwards unless ac-
-companied with a fracture of the Olecranon; it
generally takes place backward and behind
the os humeri, attended with semiflexion of

of the forearm, which cannot be extended or flexed com-
pletely — The Olecranon may be felt thro' the skin
in the os humeri, resembling a hook — The coronoid
process is loged in the pit of the Olecranon, which
prevents the easy replacement of the bones — When
complicated with a fracture of the Coronoid pro-
cess the reduction is easy; and in all such cases a
splint should be applied anteriorly, to confine
the fragments after the luxation is removed
In order to reduce the luxation, one assistant
grasps the arm below the shoulder, and another
above the wrist, for extension and counter extension
the Surgeon at the same time locks his hands
under the joint and pulls it directly outwards —
As soon as the extension and Counter extension
are sufficient, the assistants holding the fore-
arm, the Surgeon is to make a sudden bend
upwards upon which the reduction im-
mediately takes place —— " —— " ——

The Wrist

The wrist may be luxated backward and forward; tho the first is the most common — When the luxation is backward the hand is bent forward and immoveable — In the forward luxation, the hand is bent backward and also immoveable — It resembles a fracture of the lower end of the Radius, from which it is distinguished as formerly mentioned — In all cases where we are in doubt, it should be treated as a fracture — It is easily reduced by extension and Counter extension — Luxations of the fingers are to be treated in the same way —

The Femoris

The os femoris is more frequently luxated than fractured at the hip joint — Anatomists have supposed a luxation however very difficult, on account of the great depth of the socket, the strength of the ligaments and quantity of muscles surrounding the joint; but experience proves the fallacy

of the suspposition — The luxation most commonly
at level in my observation
takes place upwards and backwards, the head being
pushed out upon the dorsum of the Ilium, produ-
cing a shortening of the limb of one or two inches —
The foot is turned inwards, and the trochanter
Major pushed higher up than is natural; the
Patient is unable to ~~move~~ move the thigh on
the Acetabulum — These should carefully be
distinguished from a fracture of the neck of the
bone; it may easily be done by attending to the
following symptons viz, although the limb
may be shortened in fracture, yet a moderate
degree of extension and counterextension is gen-
irally sufficient to reduce it, but so soon as the
force is withdrawn, the shortening returns —
In luxation, considerable force is necessary to over-
come the contraction of the muscles, but when this
is once effected, the limb ~~retains~~ retains it natural
length — In fracture, crepitation may be heard
and is an infallable criterion of the true nature
of the accident — The luxation may also take

place downward and forward, in which case the head of the bone is lodged in the foramen Thyroidæum — This in point of frequency is the second mode of luxation. When this has taken place, the limb is lengthened by the descent of the head; the foot is turned out and the patient suffers great pain if the Surgeon attempts to turn it inwards; the leg is flexed on the thigh and the thigh is immoveable on the hip joint — a fulness in the groin will be perceptable in every instance — Luxations may also take place directly forwards, or forwards and upwards; these however, rarely happen, as also directly backwards or downwards and backwards — When upwards and forwards, the limb is somewhat shortened; but if directly forwards the shortening does not take plan — The toes are turned outward and the limb somewhat elongated — When upwards & backwards, counter extension is to be made by a long strap, passing between the thighs, in the groin

of the side affected, then up along the trunk, over the shoulder of the same side, and either held by assistants or fastened to a post or staple — The patient is to be laid on his side to relax the muscles as much as possible — A couple of towels are now to being fastened to the thigh just above the knee, by a circular roller, and the ends tied together, making a loop on each side of the knee, thro' which a rope is to be carried for the purpose of making extension — The limb is to be bent and while the extension and counterextension are going on, the Surgeon holds the leg and rotates the thigh, to dislodge the femur from its situation on the dorsum —. If the force of Assistants be insufficient, pullies must be substituted, by which means any power may be exerted — The return of the head into its cavity may be known by a noise which it occasions — When the luxation is downwards and forwards

in addition to the above apparatus it is necessary to place a long strap below the Crista Ilii around the pelvis, with its extremities some distance

beyond the body on the opposite side; by which assistants can make counter extension; and another band around the upper part of the thigh in the contrary direction for extension; sometimes the surgeon may make the counterextension by tying the ends of the second band, and passing them over his shoulder, while he puts his knee on the Crista, and in this way he can make the extension and counter extension at the same time - It is necessary that this extension & counter extension be both exerted at the same moment - If the displacement be directly forward and upwards the same treatment is required - I had one case in the Penn^a Hospital, in which the displacement was directly forward, and the head of the bone loged in the edge of the Os Pubis - After trying the first extension and counterextension without effect, I applied the second bandages, laid him on his back & bled him, when I succeeded in my attempts taking

sure to rotate the thigh at the same time - In this way I believe all luxations of the thigh may be reduced - Sometimes however, when the dislocation is outward & backward; the head of the bone is embraced by the capsular ligament; in this case it is found most effectual to flex the leg upon the thigh and the thigh upon the pelvis, at the same time making a considerable abduction, and knocking the head of the bone into the socket, with the hand - The patient should be kept five or six days on the antiphlogistic regimen ..

The Patella

The Patella may be displaced either outwards or inwards, but it generally takes place outwardly, passing over the external condyle of the Femur and producing a tumour on that side - In the reduction, the leg is to be extended on the thigh, and the thigh on the pelvis, in order to relax the extensor muscles as much as possible - The reduction is then easily effected - I never saw but one case of this luxation, and that was outward ..

The Foot

I observed, under fractures, that luxation of the foot generally arises from forcible abduction of the foot, which produces fracture at the same time; the bones of the leg may be displaced backward and or forward — I have seen an instance of its taking place forward, in which the Tibia pressed on the instep; this was produced by a Lady's running down stairs and missing a step — By putting one hand on the instep and the other on the heel for extension, and at the same time for counter extension; after exerting sufficient force, he pushed the leg suddenly towards the bed end the bones returned to their proper places — This Lady did not recover the use of her leg for several months —

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Sprains

The ankles and wrists are more subject to sprains than any of the other joints — They are sometimes produced by injury done the ligaments of the joint in attempts at luxation — The blood vessels are sometimes ruptured, producing a large swelling accompanied with some pain, these we should always be careful to distinguish from fractures or Luxations — In the treatment of sprains, the best remedy is cold water poured over the part; this should be applied immediately after the accident and continued for an hour at a time to produce its full effect — Clothes wet with cold water vinegar should be occasionally applied — When cold is not used until after inflammation and swelling have taken place, it then should not be used — The limb should now be kept perfectly at rest, low diet, bleeding, general and topical by Leaches should

be used; in one or two weeks the inflammation generally subsides and the patient gets well — When seated in the ankles and other joints, the patient supposes himself nearly well too soon, and that nothing remains but weakness; forgetting that the parts had been ruptured and require some time to be restored — He goes about (thinking that exercise is the most effectual thing to restore the parts) till inflammation returns and confines him to his bed again, after a short time he again ventures out, and with the same effects — In this way I knew a Lady proceed until suppuration came on, Hectic supervened and Death was the result, after refusing to submit to an operation — . — . —

"

Injuries of the Scalp

When the scalp has received a smart blow, the part becomes tumefied, soft, and pappy to the touch; with a wound it, giving the idea of depressed fracture — Of these circumstances the surgeon should always be acquainted that he may be able to distinguish it from a fracture, and thereby save the operation of cutting down and exposing it, which would not only give the patient much pain, but also cause a tedious suppurating sore, with caries and exfoliation of the bone — The knife should be never ~~now~~ to make an incision, but in cases where there are symptoms of an injured brain; and to apply only a bread and milk poultice; or cloths wet with cold vinegar and water — In a short time the extravasated blood will be absorbed & the part returns to its healthy state

Wounds of the Scalp

Incised wounds of the scalp, are to be treated as those of any other part — The sides are to be approximated with adhesive strips 'till union takes place — Contused wounds require no specific treatment; a poultice of bread and milk is to be applied until sloughing takes place, and suppuration & granulation have come on; when the adhesive plaster will expedite the reunion ——

Sometimes the scalp is torn up for a considerable distance, leaving the Cranium bare below — I have seen a contused wound extending from the forehead to the Occiput, with the scalp separated and hanging on the cheeks — It has been a question whether this detached portion should be cut away or retained by adhesive plasters; the older Surgeons preferred the former; but experience has proved that it will unite, and thus preserve the natural cov-

-vering of the Excision — altho' abscesses may form
underneath, yet these will heal as in any other part
after being opened with a lancet — The part thus
torn, should be well cleaned of all extraneous
matter and the hairs should be shaved off, before
they are replaced, otherwise abscesses will certainly
be the consequence — If the parts be lungely torn,
a stitch or two may be necessary to relieve it, ma-
king a stiff knot in the ligature — We should
avoid drawing the edges close together, else when
swelling takes place, the parts will be so tight-
ened that sloughing may be produced — If
you leave an opening between the edges this
will be prevented; and by means of the stiff knot
you can bring them into close contact after sup-
puration has come on — The adhesive Plaster
is always preferable to stitches — " — " —

" "

Punctured Wounds

These will produce inflammation of the whole Scalp; especialy if the aponeurosis be punctured- The most speedy way to prevent this consequence is to dilate the wound from one end to the other, and this converts it into an incised wound- If this proves unsuccessful, the Scalp inflames, pain in the head, fever and sometimes delerium succeed- It might be supposed a difficult matter to tele whether delerium arose from the external injury or from an affection of the brain itself- It should always be imputed to the external injury when the Scalp is in a high degree of inflammation, for it is difficult to suppose that both can be inflamed at the same time; thus we know that inflammation of the villous coat of the stomach is not attended with peritoneal inflammation; in like manner in inflammation of the pleura we endeavour to produce a translation of it from the internal to the external surface be means of blisters- It does not admit of a doubt that inflammation of the dura mater and Scalp can exist at

the same time — The same general remedies should be applied as in inflammation of other parts, viz: Bleeding, Purging frequently, low diet, together with Blisters applied over the inflamed scalp — If these remedies be neglected, the scalp becomes sloughy, the aponeurosis comes away, and the bone exfoliates — There is another manner in which patients may suffer from injuries of the scalp, constituting a diseases of the most difficult treatment; it consists of the most excruciating pain in the part stricken altho' no incision is obvious — A Lady looking out of a window received a slight blow from the sash's falling; the immediate injury was slight, but afterwards she suffered violent pain in the spot, which continued for months to resist all the remedies prescribed by Dr Rush — I saw her and advised a crucial incision, to divide the nerves in the part; she consented, and from that moment the pain ceased and never returned — This Lady had been so much exhausted by the long continuance of pain, that she lost much flesh, and her friends believed she was

going into a Pulmonary Consumption — I have seen another case produced by a fall on a stone; the pain was most distressing; Bleeding in the arm and leeches, had no effect I gave Mercury to produce Salivation, but could not effect it; Bark, Opium from 5 to 6grs a day, Cicuta and Arsenic were tried in vain — I then had recourse to the Crucial incision, which produced an entire cessation of pain for a fortnight, at which time it returned, I applied Caustic to the wound to keep up the discharge, but no good effect was produced; purges and warm bath were equally ineffectual; the pain grew more violent till at length convulsions were produced; in this distressing situation, she was advised to go in the Country, which relieved her entirely; I have not understood whether she has ever had a recurrence — A third case was a Man affected with contusion on one side, and a contused wound on the other side of his head — The pain was so violent that he could not suffer any one to walk across the room; I tried the incision on the contused side first and with the effect of relie-

-ving the pain in that side; the next day it was felt equally severe on the other side; I made a second incision and the pain left them entirely – Thus we find in some it produces a cure while in others it has no good effect –

P.S. The Lady who went into the Country was taken shortly afterwards with a pricking by which she discharged a quantity of gelatinous watery fluid – Encouraged by this circumstance and believing that the pricking was the means of putting a stop to her complaint, I resolved to try Emetics in similar cases, and from the experience I have had, I am authorised to state that they are sometimes productive of the happiest effects –

Of Compression

The symtoms denoting compression of the Brain, are Stupor drowsiness, loss of sense, Speech and voluntary motion together with sickness at the Stomach, vomiting and Stertorous breathing — Compression is frequently induced by a depressed fragment in cases of fractured cranium — It is also produced by an effusion of blood or serum, in consequence of ruptured vessels either between the dura mater and cranium or dura mater and Brain; also from fractures unaccompanied by depression or when no fracture exists — When compression takes place in consequence of fracture, it supervenes immediately after the ~~fracture~~ accident; but when blood or serum is effused from the blood vessels, sometime is requered for it to accumulate in sufficient quantity to produce symtoms of compression — I recollect a boy who received a blow from a brick-bat, which caused a fracture of the Skull with depression; yet he returned home related the whole circumstance to his mistress, and fell down suddenly into a deep coma — Now in this case compression

was occasioned by the effusion of blood from the ruptured vessels and not from the depression of the bone in the fracture— This was evident from the quantity of blood found on the dura mater, after making a perforation with the Trephine The patient was relieved on evacuating the blood; when it happens that no vessels are ruptured, compression may not follow tho' there is a depression of some of the fragments, as in the case of the boy— I have seen a fracture on the forehead with a depression in which I could lay my fingers in, and yet no symtoms of compression appeared— In all these cases, however, in which there was much depression, the fracture was over one of the Sinuses— In every case where a fracture exists with a depression, it is necessary to perforate the bone and elevate the depressed portion of same— When no depression exists it is equaley necessary to operate, in order to evacuate the effused blood— Whenever external violence has been done to the head attended with symtoms of compression, it will be proper to divide the integuments and make a perforation immediately opposite the stricken part; when no marks of external injury are obvious, we must depend on

general remedies, as it would be difficult to determine
where to fix the trephine — read Mr Abernethy on
this Subject

Inflamation of the Brain.

This a notheis consequence of external violence. It never take
place immediately but after an interval of several days. The
symtoms denoting it are restlessness, want of sleep, frequent
hard pulse, hot dry skin, flushed face, inflamed eyes, nau
sea, vomiting, sometimes rigors. and towards the conclu
sion, convulsions, coma and delerium. This may be a conse
quence of contusion or contused wounds of the scalp, some
times from a simple fissure, from a depressed fracture, and lat
ly from a simple contusion. When it proceeds from con=
tusion, you can feel the part tumefied, soft and pappy, and
on making an incision you will find the periosteum sepe
rated from the bone and the bone of a whitish colour and a
discharge of bloody serum from the wound. If a perfora=
tion be made in the bone, pus will be found between the
bone and the dura mater or between the dura mater or Pia
mater or between the Ventricles; if there has ben any extetnal
wound ale the symtoms increase, the discharge of pus ceases,

and a thin serous matter appears, or there is no discharge of pus-
The scalp also is found seperate from the bone or is easily
seperated — In all such cases it will be necessary to give vent
to the discharge of matter, and in some cases even to perforate
the dura mater in order to prevent the immediate death
of the patient, from compression of the brain — The perforation
of the dura mater is always a desperate act and should never be
had recourse to unless the immediate death of the patient is
apprehended, in which case it can do no harm and may possi-
bly do good — In every case in which I have seen it performed
death was the consequence — General remedies should be used in
order to prevent inflammation, low diet, frequent purges, copious
bleeding, and blisters, over the head keeping up the discharge
after this action have sometimes prevented the inflammation;
but if symtoms of compression notwithstanding appear, the Tre-
phine must be used to evacuate the fluid — It is a question whe-
ther we should trepan in every instance where a fracture exists
to prevent inflammation — Pott thinks it advisable; if the operation
be carefully performed it certainly is best — Cases however have
occurred where patients have recovered without any operation —
upon the whole I think it advisable always to perform the operation;
it will have no injurious effect, and will enable us to ascertain the
extent of the injury ".

Concussion of the Brain.

The symptoms of concussion, according to Pott, are similar to those of compression from a collection of pus—Restlessness, wild look, incoherent talking, hard pulse, small degree of fever, vomiting, palsy of some part of the body, loss of sense, and spasm or rigidity of some part, may continue for a long time—All the remedies for inflammation are indicated here, a dark room, bleeding, blistering over the scalp, purges and opium, salivation by mercury has succeed when all other remidies have failed—As a general remedy I would advise the application of cold water to the head, which will diminish the effusion from the ruptured vessels—When these remidies fail a perforation must be made with a Trephine, in order to evacuate the effused blood; in some instances it is confined between the membranes, making a convex protrusion of the dura mater, and giving a sense of fluctuation when pressed by the fingers—In this case it is recommended to perforate the dura mater; but I would not advise it, for in all cases that I have seen of an artificial opening of this membrane, inflammation and suppuration have supervened as before stated and quickly followed by death—

In case when I trepanned and found considerable tremor from matter between the membranes, I would not perforate but trusted to general remidies, particularly to bleeding— The patient was a boy 11 years old, whom I bled 4 times a day each time "ad deliquium animi" for 5 days, by which he recovered— Had I punctured the membrane I believe he would have died— There has, we are informed, been recoveries after such an operation, and even after the brain itself has been injured— Fungus sometimes arises, for the treatment of which a variety of remidies have been prescribed, such as escharotics, the knife, the ligature &c— In every case which I have seen, death has ensued— A certain writer advises an excision of the parts with the knife, and where there is an abcess below, to plunge a lancet into it— In such a cases I should not hesitate to introduce the lancet ½ an inch or so if I could thereby evacuate the contents.

Apoplexy.

This disease generally makes its attack suddenly, and often proves fatal - It consists in a sudden diminution of all the senses both external and internal, so that the patient knows nothing that has passed during the attack - The respiration is difficult & interrupted, the pulse slow and hard, the countenance flushed; the patient is unable to swallow his saliva which flows out, and the mouth is drawn to one side - Apoplexy does not often occur in the young, altho' I've seen one case in a child - It generally takes place at the age of 60 years, in corpulent persons, of a large head and short neck, who lead inactive lives, are accustomed to the immoderate use of spirituous liquors, intemperate diet &c - The stoppage of some long accustomed evacuation may also produce it - There are some premonitary symptoms, worthy of notice which generally

precede the attack of Apoplexy; such as Vertigo, head-
-ach, bleeding at the nose, partial deafness, palsy,
violent pains in the head, drowsiness, disagreeable
dreams &c— These symptoms or some of them increasing
the attack is brought on by violent straining, drunk-
-en frolic, tight ligatures around the neck, intense
study, violent fits of passion, excess in venery, the sud-
-den suppression of some long accustomed evacuation,
or whatever increases the impetus of the blood in the arteries
of the head— On dissection, the brain appears diseased,
the venous as well as the arterial ~~system~~ system appe-
ears in a remarkable state of repletion— The carotid
cerebral arteries, and their branches and ramifications
-ons are often gorged with blood, and the longitudinal
and lateral sinuses are swelled and distended—
The membranes of the Brain are of a bluish appearance—
Morgagni relates a case, in which the effusion took ~~from~~
place in the cavity of the spinal marrow and produced
death by the pressure, it there exerted— The inner

coat of the bloodvessels appear to be diseased — When an attack of Apoplexy does not prove fatal and the hemorrhagy stops, the blood which has been effused is gradually absorbed, the cavity, however, it occupied is not obliterated but is occupied with serum, which in some instances becomes so concrete and hard as to form hydatids — In this case the patient is very apt to have another attack, which may likewise be absorbed as the former attacks; but in the third, the blood is not absorbed and the patient never survives it — Apoplexy then consists in a sudden and violent pressure on the Brain; if the blood be gradually effused, the brain might accommodate itself to the pressure and death would not be the immediate consequence, it therefore must follow that in Apoplexy, the effusion is sudden and violent — This as stated before is occasioned by any cause, so increasing the impetus of blood that it cannot be resisted by the coats of the vessels, and a rupture takes place — It is always of the greatest importance to distinguish between Apoplexy,

Epilepsy, and Fainting and Intoxication — Apoplexy can be easely distinguished from Epilepsy by the stertor, sopor, diminution of the power of volition and the absence of convulsions — In Fainting there is a complete stoppage of the action of the heart and arteries, whereas in Apoplexy there is only a diminution It is sometimes more difficult to distinguish between it and intoxication, but generally the smell of the breath and the appearance of the countenance will lead us to detect the one or the other — as this disease always proves fatal, we should ~~guard~~ guard against the occasioned causes by avoiding every thing which has the least tendency to produce it — After an attack has made its appearance, it is our object first to ~~prevent~~ put a speedy stop to the effusion, and then to cause the absorption of blood already effused; to this effect the patient should be undressed and put to bed; (his head should be considerably elevated) he should then be bled "ad deliquium animi;" cold effusion to the head should be made, the

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bowels opened by Clysters; After the patient has lost as much blood from the arm as he can well bear, scarifications and leeches to the temples should be had recourse to - As soon as the patient can swallow, the stomach and bowels should be evacuated by Cream of Tartar and Jalap - Some practitioners recomend the use of emetics; but this I think always improper, when the disease arises from effusion on the brain - Sometimes Apoplexy is induced by a peculiar state of the stomach, in which case emetics are serviceable, but never when there is an effusion - I know an old Gentleman who always has symptons of apoplexy excited when he eats any thing that disagrees with him; Cabbage always produces this effect, I never fail to relieve him with Volatile Alkali - I have no doubt but that a Purge would have the same effect, if it could operate speedly enough to answer the purpose - In my opinion emetics should always be avoided, however this is a contested point

and their efficacy is supported by many; but I would not use them, as I can do well without running the risk of them - My plan is always bleed the patient with a view to diminish the impetus of the blood, and then I evacuate the bowels; so that in this way I think the patient has the best possible chance, let the disease arise from what cause it may —

"

H. 114

Inflammation of the Eye

Inflammation of the eye, may take place either on the lids, conjunctica, or in the globe of the eye itself When seated in the lids, it often comes on in the nights the patient waking in the morning his eye lid swelled, and experiencing pain of a burning kind — The best application we can make is to dip a piece of rag (lint never to be used) into spirits and squeezing as much as we can out of it, lay it on the part — When the inflammation is considerable and attended with fever, the patient should be bled, and purged. The application of a dozen leaches and the antiphlogistic plan will generally succeed, if the former mode fail — ..

Doctor Physicks thinks, that the inflammation is seated at the roots of the hair, resembling tenea Capitis as a proof of this opinion, the inflammation often ceases, when the hair is plucked out —

He recommends, tar ointment and Spermaceti bit
When the edges of the eyelids are ulcerated, the citron
ointment is the best application; which is to be put
on at bed time — Mercurial ointment is also good —
When the inflammation takes place in the conjunc-
tiva, the white parts become red, the eye is watery,
pain of a hot burning kind is felt, as if extraneous
matter was there; there is an intolerance of light,
and sometimes a small pimple appears, especially
in Children — Under these circumstances, the
most prompt and vigorous remedies are demanded,
else adhesions will form and a dark spot will
take place and perhaps destroy the eye — When the
globe of the eye becomes inflamed it frequently
extends from the inner Canthus, to the Cornea; in
this case a thickening of the parts takes place, cal-
led unguis — Remote causes are friction, the
introduction of acrid substances into the eye, in-
tense looking &c. I once knew it produced in

H. 18

a young man (who was in the habit of washing his face and eyes with urine) by washing his eyes with urine while he had a Gonnorhoea — When inflammation attacks the globe of the eye unless it be speedily arrested it sometimes proves fatal, by extending rapidly — Whenever any extraneous substance is lodged in the eye, it must be speedily extracted; and I would remark that after it is extracted there remains a specks which may sometimes be mistaken for another portion — Trichiasis or inflammation induced by the inversion of the Cilia, sometimes takes place — In this case I think the best way is to cut off all that portion of the eye lid from which the Cilia proceeds — In all cases of inflammation of the eyes, one of the best remedies is Bleeding, afterwards the application of leeches — If these do not relieve the inflammation, the vessels of the adnata with the shoulder of the Lancet, should be tried

After the inflammatory symptoms have subsided or moderated Blisters applied around the eye and neck often complete a cure — When the inflammation is deep seated, these remedies are to be persevered in; the Patient kept in a dark room and put on the antiphlogistic regimen — When opacity of the Cornea takes place, salivation, powdered glass, molasses &c have been prescribed, but in my opinion they do more harm than good — Dr Physick relates a most violent case in which tarr water was used with the happiest effect — Astringent Collyria should never be used until the inflammation has subsided — An infusion of the pith of Sassafras, dropped in the eye, is a most grateful and efficacious remedy

Inflammation of the Conjunctiva & Cornea

The Conjunctiva becomes red, painful when exposed to the light, the pain of a hot burning kind; there is generally a sensation of extraneous matters in the eye —

Sometimes the pain extends to the forehead and temples, Sometimes the inflammation only occupies a spot resembling a pimple; this is more common among Children, causing irritation of the eye, intolerance of light; the inflammation may extend to the Cornea and make it opaque by the extravasation of fluids; the pimple on its disappearance leaves a film on the spot— Inflammation between the Cornea and Sclerotica constitutes the disease called Ungeis; the remote causes may be mechanical violence, wounds &c &c —— " —— " —

Trichiasis

This consists of an inversion of the Eyelashes, and may terminate in blindness. 2nd It is caused by acrid substances, as lime, caustic and smoke— 3rd Too great exertion of the eyes in viewing small objects, Cold, intense light, heat, intoxication and certain inflammatory diseases, as the Small pox,

measles, and especially the venereal disease —
I have known two instances in young men, occasio-
-ned by washing their eyes with their urine, while
affected with gonorrhoea — The eyelashes, when
inverted, must be pulled out — Lunar Caustic
has been recommended to prevent their growing
again, but I am not pleased with the applic-
-ation; I deem it much better to dissect out that
part of the eyelid on which they grow, this
can easely be done and does not occasion as much
deformnety as you would imagine — Another
form of this disease, is when the lower edges
turn up, occasioned by contraction of the tarsus
and should be relieved, by dividing it either
in the middle or at the extremity — "

" —

Laryngotomy.

When foreign substances have entered the Larynx, and other means prove abortive, the operation of Laryngotomy becomes necessary, and is performed in the following manner — The Surgeon is to feel for the space between the Thyroid and Cricoid Cartilages of the Larynx, over which he is to make a longitudinal incision thro' the integuments, about an inch in lenght; he then stops a little until the hemorrhagy is overcome, and then makes a puncture between the Cartilages into the Trachea; in order to keep the space so punctured open, it is necessary to introduce a tube, which is to be occasionally removed and freed from the mucus that adheres to it — a piece of gauze may also be wrapped round the end outside, to prevent the entrance of foreign matter When the substance that caused the operation, is taken out or removed, the tube is also to be detached & the external wound brought together — This operatio

is very rarely nuefsary, for it is generally better to introduce the bougie which may be done in every case, except when there are spasmodic convulsions in the parts; then the operation must be performed — .. — . . — . . .

Stricture of the Oesophagus.

We are sometimes called to extract foreign substances from the Oesophagus; it has frequently happened to me; patients have appeared with large pieces of bone, meat &c stopped in their passage by a spasm to which the Oesophagus (like other muscular bodies) is subject; it is in general the custom to introduce the probang and try to push the substance downwards — In this way we sometimes succeed but when it fails, I generally give 6 grains of Tartar Emetic dissolved in ℥ij of water, and order the patient to gargle with it; This generally produces nausea, and the spasm suddenly ceases, and the patient is able to swallow or throw up the substance — In this manner I've pu-

quently succeeded, in some instances, however the foreign body being sharp pointed, cannot be pushed down, but sticks fast in the tonsils; in this case you are to request the patient to open his mouth as wide as possible, and very you will probably see the substance, and be able to extract it, with appropriate pair of forceps— Should you not be able to see it, you must feel, and direct the forceps where it is— If neither of these succeed and the substance remains in the Oesophagus, suppuration will take place, and the substance will fall down into the stomach— It is necessary to observe, that however the substance may be, when it falls into the stomach, it can do no injury; the practitioner should not forget this, for we often see patients very uneasy at the idea of his sustaining farther injury— " "

Polypus.

Polypi are fleshy substances of different colours & sizes, & in different cavities; & most frequently is seated in the nose; they usualy commence at the ossa spongiosa, and produce at first no other effect than a thickning of the nose, which induces sneezing and a flow of water from the eyes, increasing gradualy they at length stop the passage of air and cause that change of voice which has obtained in common, the term of speaking thro the nose; the Polypus assumes gradualy the form of the nostril; it becomes visible and is sometimes seen below the soft palate and behind the uvula; the pain generaly increases, but than in general there is not much. The hearing is often impaired by the Eustachean tube being press. deglutition is also impaired by pressure on the Velum pendulum palati; the bone becomes carious, and all the symtoms lead to emaciate the patient, and finaly if Surgical aid is not called for, Stupor and death terminate the case — Authors, in treating of Polypi, distinguish between such as are malignant, and those to not to be touched and such as are mild; but I think them all alike, and advise extraction in all cases, in the earliest stage — There are three modes of extracting polypus, 1 Cutting them away, 2 Seizing them with a pair forceps and tearing

them away, & tying them with wire to prevent the circulation in them - A polypus is not alone visible in the anterior nares, but down the soft palate and fauces; when it is only in the anterior nares it may and should be torn away with forceps - The hemorrhagy which follows this operation, is profuse, and may trouble the young practitioner, but there is little or no occasion to be alarmed, for it soon ceases spontaneously, and when it does not may be easely suppressed by pushing lint up the nostrils and letting it remain 4 or 5 days -

When we operate with wire, it is to be passed thro' a double Canula and introduced over the base of the polypus, squeezing it together and letting it remain in that manner for 24 or 48 hours; the circulation being thereby stopped, it will die, and at the end of 8 or 10 days fall off - An inconvenience attending the use of the wire, is that the polypus may suddenly fall, or fall at night and cause suffocation - This can be obviated by tying a liga to it after the application of the wire, which is to be kept outside - When the polypus is broad and extensive it must be cut away with the knife, after which it is necessary to introduce tow or lint for some time

so as to prevent its rising again, or we may use Lunar caustic with a bit of linnen on that part which may come in contact with the sides of the nose, that require no touching

"

Hare Lip

This is exclusively situated on the superior lip, and takes it name from its resemblance to the lips of the hare There are sometimes two slits, forming what is called the double Hare lip, it is commonly congenital, but may be produced by wounds in the parts not being sufficiently closed and attended to in Dressing, in Children the fissure extends frequently through the superior Maxillary bone, forming a connexion between the mouth and nose, in which case the teeth may be very much projected — In wounds we should bring the opposite sides into close contact, so that they may unite, but in Congenital hare lip the edges must be previously cut down so as to form an incised wound, one then the parts are to be brought into contact and retained so by the twisted Suture — The operation may be perf-

-curred on a young subject with safety, and when the
fissure runs to the palate, I would always recommend it
to be done as the second month after birth, by which means
the bones may be brought together and unite in a proper
manner— You should be cautious to have the lips well
paired, as no Union will take place, when the edges are
callous— In the double hare lip, you are to operate on one
side at a time, for fear of inducing too much inflam-
mation and perhaps mortification— The use of Scissors
has been objected on account of (as it is alleged) their
contusing the parts; but I see no reason at all in the
argument; if the Scissors be sharp (and a neat Surgeon
will always have sharp instruments) the incision will
be made much more complete and with considerable
less difficulty than if we use a Scalpel— The incision
should extend over the angle of the slit, and form as nea-
rly as we can effect it, the two sides of an equilateral
triangle. A otherwise the union will not be neat—
Having made the proper incision, the new edges

are to be approximated and two Silver pins introduced to keep them so; the lower one first and then the upper one; these pins are to be provided with moveable steel points, which are to be removed after the introduction of the pins; a ligature consisting of two coarse threads (well waxed) is then to be applied around the needles, thus 8 or standing, thus 8; about the fourth or sixth day the pins may be removed; the ligatures however should be suffered to remain on the lip until the ~~[illegible]~~ they drop off sua sponte— The Surgeon should always endeavour to have as little deformity and scar as possible— ..—.

Schirrhus Tonsils

These are sometimes as large as to fill up the fauces; they always require extirpation, after which they never grow again — There is nothing cancerous in them, and they appear to be only a thickening of the gland, induced by previous inflammation — The most expeditious way of extirpating them, is to clip them off with a pair of Scissors, curved at the point, and provided with sufficiently long handles; they are called Tonsil Scissors — When the basis is not small, it is imprudent to make use of the Scissors, because the hemorrhagy create coughing and disturb the Operator; in such instances, instead of the Scissors, a ligature is to be passed thro the nose and around the Tonsil, in the manner directed in Polypus; the precise time when they will come away, cannot be precisely ascertained, in general we may calculate from the 5th to the 8th day — When the tonsils are affected with

abscess, we generally operate with a scalpel, the blade to be wrapped to the point with linen; the best mode, however, is to operate with a lancet, enveloped in a canula, which pushes out by means of a spiral spring, and is provided with a peg on the handle to regulate the depth we wish to convey it to — " — " —.

"

Stone

Calculi are found in the Lungs, Salivary glands, bowels and gall bladder, but most frequently in the Bladder and kidnies — It is not my intention to enquire into the causes producing the stone or to trace it from its incipient to its last stages; it is enough to say that different substances may form the nucleus, around which the stone gradually collects and increases; a clot of blood may be the foundation of Calculus — By sawing a large stone there we find different layers of Calculus incrustations of different thickness and of different colours, some being

dark, others white, and some of the variety of shade be-
tween these two; they are sometimes found in the kid-
nies, ureters, and as before said in the urinary bladder
in either case they generally produce pain— I believe
that they most frequently ~~[illegible]~~ originate in the kidney
and are afterwards washed down into the Bladder by
the urine— When a stone is in the kidney, it generally pro-
duces pain, irritation will bring on inflammation
of the parts; costiveness will exist, pain in the Lumbar
Region, and many other symptoms— If the stone be
not too large to pass thro' the ureters, the urine will
transmit it to the Bladder; but if there prevents this,
an accumulation of ~~[illegible]~~ the symptoms will increase & run
higher on account of the urine being confined— When the
Stone is in the ureter, the pain will be violent, and the
Calculus may be washed down by drinking plenti-
fully of barley water— Whenever a patient, after having
complained or evinced symptoms of stone in the kid-
ney, complains of the ureter or bladder, we have
reason to suppose that the stone has changed its

situation to either of these places, as the symptoms may indicate; and should try to evacuate it by diluent drinks, and advise ~~and to~~ the patient to retain his urine for a time, and then standing up (that the stone may be opposite the orifice of the urethra) void it in a full stream, by which means, it sometimes happens that the calculus is evacuated, before it becomes large as to produce an increase of pain, and an incapacity to pass it without a chirurgical operation. If this fail, the symptoms become dreadful and the unfortunate patient is a victim to an endless chain of excruciating pain and anxiety until the Surgeon affords relief. The symptoms are heat, itching and difficulty of voiding urine, together with smarting pain while it is passing; sometimes it is suddenly stopped after running in a full stream; it is pale, turbid, emits a bad smell, purulent and sometimes contains pure pus — There is great uneasiness in the perinæum, and pain along the penis,

with tenesmus, costiveness and bad stools — The patient sinks from the violence of pain and want of sleep, and is in fine one of the most wretched beings in nature — These symptoms do not unquestionably prove the existence of Calculi, for inflammation of the urethra, Abscess, Ulcers &c of the parts may be attended with the same train; besides this, Stone may exist a considerable time in the bladder without producing such symptoms; of this there has been a complete proof in the following case, which is well attested — Case A Gentleman, who had an imaginary stricture of the Bladder, was under the care of a Surgeon, various methods were ineffectually used; the patient at length began to suppose he had been mistaken in supposing himself affected with Calculus; he asked the Surgeon if it could not be possible he had the gravel which induced the Surgeon to enquire more particularly into the circumstances of the case, and

by the answers he recieved had no reason to sup-
pose the presence of Calculi — The patient died some
time afterwards of a fever, and on opening the blad-
der, a tolerably large and rough stone was found —
When small pices of Calculous matter are passed off with the
urine, we have very good reason to believe that the dis-
ease exists — The most certain and best mode of ascertaining
is to sound — This is done by introducing an appropriate
instrument through the urethra into the Bladder,
by which the stone will be either felt, or its contact
with the instrument distinctly heared — In sound-
ing, however, the most skillful Surgeons may be
deceived in the first trials, it ought therefore to
be repeated; at each trial, the patient should
change his position — After we have ascertained
that one does exist, nothing can be done for the
relief of the patient, but a Surgical operation
called Lithotomy — After the calculus has attained
that size which renders expulsion thro' the

urethra impracticable, no medicines can be expected and consequently the expulsion by artificial means becomes necessary in order to save the life of the patient — It is nevertheless necessary to make use of medicines to relieve the pain until it be convenient to perform the operation — Among these palliatives, Demulcent drinks and opiates foremost —— " —— " — "

Sounding

It is here necessary to be provided with sounds of different sizes — By sounds we mean, instruments made of well polished iron, crooked in the direction of the bladder, and of an appropriate size for its passage thro' the urethra — The sound is to dipped in warm oil, and the patient being laid on his back, it is to be introduced with the concave side towards the Abdomen — When the point approaches the neck of the bladder, it may be turned so that the concave side faces the perineum; it is

them to be continued down into the Bladder, where (if stone exists) both the surgeon and by standers will hear when it comes in contact with it; sometimes however, the first trial is not decisive, and to be depended on — If we fail, we may introduce the sound in a contrary direction; the pelvis of the patient should be incised in such a manner as to throw the stone on the fundus of the bladder; then the sound rotated, until we have perfectly satisfied ourselves on the existence of it — If the stone be not too small, the finger introduced into the Anus, may tend to its discovery ——— " ———— "

Lithotomy

I have already said that when Calculus exists in the bladder the operation of Lithotomy is the only effectual cure — Before proceeding to this operation, it is necessary to prepare him for it, if he be plethoric, and robust, by an antiphlogistic regimen for five or six days previously to its performance; for this purpose, he should take a purgative to evacuate the intestinal canal (I prefer castor oil) A short time before the operation, a considerable dose of Laudanum should be administered to allay pain, and the patient should be advised to retain his urine, so as to have the Bladder distended, and when this cannot be done spontaneously, a compress round the penis will answer, and should be practised — The instruments and other necessaries which should alway be at hand before we attempt the operation, are as follows: 1st A table on which we lay the patient: 2nd

A blanket and pillow; 3rd A ~~sheet~~ sheet spread over these; and long enough to cover the lap of the surgeon during the operation: 4th Warm water: 5th plenty of sponges: 6th Warmed oil (the best method of obtaining this, is to fill a glass with it and place it in a bason of hot water) 7th A couple of strong fillets to tie the patient with; 8th A grooved staff: 9th A scalpel: 10th A straight sharp pointed bistoury secured, open at the handle with a waxen thread: 11th A Gorget, these are to be found of different sizes & shapes, that of Sir Casar Hawkins was originally blunt at the sides, but upon using one which was a little sharp pointed by rust, he found the operation much facilitated, which gave rise to the improvement of having a cutting edge— The improvement of Sr Physick, viz, having the blade separate from the handle, is a very good one, and will generally the best: 12th Forceps of different sizes— 13th A scoop,

in some cases this instrument is found very useful in
ofsisting the extraction where there is much difficulty—
14th A pipe and syringe: this is necessary in order to
wash out any particles when the stone happens to bre-
ak – 15th Needles, ligatures and Tenaculum also Com-
-presses – 16th Wine should be at hand in case the patient
patient feels faint – 17th A pair of very strong forceps
with a screw to bring the ends forcibly together; this
instrument is only necessary where the stone is so large
that it cannot be extracted without breaking it—
All these things being laid in due order, the patient
is laid on his back on the table, and the Surgeon
introduces the grooved staff and feels for the stone
in order that all mistake may be avoided, and not
the least shadow of doubt remain, the ofsistant
should also make a trial – If the stone cannot
then be felt, I think it always best not to proceed
the operation – When they are all satisfied as to the existence
of the stone, the fetters are to be applied to the wrists, the pa-
tient

desired to grasp each foot out side, and the hands & feet secured in that manner; the perineum should now be shaved/or may be done before/. An assistant on each side supports the patient by placing the knee on the corn pits and grasping the foot with his hand on either side; the Staff is now taken from the assistant by the Surgeon and turned with his left hand towards the right groin of the patient; the Surgeon now begins the operation with a scalpel, by making an incision thro' the integuments from one side of the Scrotum to about half way between the anus and tuber Ischii on the left side — He is then cautious to respect untile that point of the prostrate gland is in view and then he is to penetrate to the groove of the staff with sharp pointed Bistoure, having previously himself taken the staff; the Bistoure must be carried, in penetrating to the staff, in the direction from the anus to the Scrotum — the beak of the Gorget is next to be introduced thro' the perineum till it reaches the grove of the staff; the gorget is then to be carried directly forward, dividing the membranous

part of the Urethra, the prostrate gland, and neck of the Bladder; its entrance into the Bladder will be known by a peculiar sensation conveyed to the Surgeon and by a flow of urine— Much care must be taken to prevent the gorget from shifting out of the groove of the staff, by elevating the handle of the latter, by this we mean to raise it from the groin and bring it to right angles with the body if this be not carefully done the Gorget may slip over and wound the rectum; the gorget is now to be drawn out, and the Surgeons finger is insinuated as a director for the forceps; the staff is next to be removed and the forceps introduced— The stone is carefully to be sought for with the forceps by elevating the handle so as to bring the point to the fundus of the Bladder, when the stone will naturally be, unless adhesions have taken place— When it is found we must endevour to place it lengthwise in the forceps so that its smallest diameter may oppose the wound; this may be effected by introducing the finger— The stone is then to be gradually extracted— Whenever the stone is large this is the most painful part of the operation, and the finger is

or scoop must be used to assist— It is proper to carry the handles of the forceps from one side to the other, in such a manner that each handle may act as a lever— If the stone, thus extracted be rough there is reason to suppose that no other exists in the bladder; at all events, the surgeon may ascertain this with his finger, which should first be dipt in oil; or a female sound will answer— It sometimes happens that the stone breaks; in which case the syringe & pipe must be used as directed; the larger pieces however, should be extracted by the small forceps— It now remains for the surgeon to examine the hemorrhagy, and if any vessels are cut, to take them up, and pass a ligature around them; if, however it be a large artery as the "pudenda interna" that we cannot so easily get at it, I would advise you, to place the finger on it, and pass a needle and ligature under, then tie it with the flesh &c: This, as I think I formerly mentioned, happened to me in

my first operation of Lithotomy — If the bleeding
vessels be small, the patient be weak, and no pul-
-sation felt, a Canula is generally introduced, and
soft linen pushed up in the wound, so as to make
pressure on the vessels — This, however, has its
inconvenience for it may go either to one side of the
bladder or the other, ~~and~~ stop the urine and pro-
-duce mortification — I think, therefore, that it would
be much more safe, first to introduce the catheter to
afford a passage for the urine and then the plug-
-ged Canula — The operation being now finished,
the wound is to be cleaned of coagulated blood, and
all extraneous matter, and dressed with simple se-
-vate; the patient ~~bound~~ loosened and laid in
bed on his left side — A sheet folded and placed under
his hips in such a manner, that when it gets wet
with urine & a dry portion may be pulled out — If the
first of the foremen dose of Laudanum is not sufficient
to ~~procure~~ procure sleep & rest, another should be given

The Surgeon should be very attentive for the first 24
hours; afterwards if he appears to sink much, a warm
bath will be likewise given considerably; and should he
complain of much pain about the wound, an injection
of flaxseed tea and Opium will afford relief — He is
to be kept as still as possible, and his hands should
be kept constantly in contact — Every thing tending
to produce inflammation should be carefully
avoided; if notwithstanding inflammation should
occur, we must treat it as already mentioned under
that head — N.B. I forgot to mention that during
the introduction of the Gorget, the patient should
be requested not to strain as the intestines have
sometimes been wounded by it — .. — .

Hemorrhoidal Tumors

These are seated either on the verge or outerside of the anus or inside of the Rectum. They sometimes bleed very much and reduce the patient considerably. Sometimes they are pushed down with the gut causing prolapsus ani, and are found so large as to press on the Uretra causing a difficulty of discharging Urine. When they are much inflamed, great relief is obtained by a horizontal position, Antiphlogistic regimen and the application of 30 or 40 leeches to the parts; a poultice of bread and milk, and various other remedies produce the same effect; but they only give temporary relief. A radical and complete cure can only be effected by Surgical operation, which is done in two ways 1st by excision & 2d by a ligature round them, thereby cutting off the circulation. The first is dangerous from the profuse hemorrhagy which ensues. I generally pass a ribbon round the neck of the tumor when small; if large, a needle with a double ligature is to be passed thro', and tied on each side.

I've known a tumor drop off in two days, by this mode
of treatment

Schirrus and Cancer

4th ry

Schirrus is a hard insensible tumor, to which the name of Cancer is applied when it ulcerates — It is always desirable to distinguish what tumors will end in Cancer — Cancer is sometimes caused by inflammation, the coagulable lymph secreted, remains there and forms a hard Schirrus tumor — Scrophulous persons are liable to it, and it generally pervades the breasts of females — Whenever these tumors are doubtful, it is best to extirpate them — Sometimes there is no exciting cause; their progress is various, requiring sometimes thirty years, & oftens only eight weeks — When a schirrus tumor is about to turn to cancer, it is enlarged and hardened with purple edges; at length varicose veins surround it which from their resemblance to crabsclaws, have given name to the disease — It is attended with violent shooting pains, the lymphatic glands in the vicinity become indurated; at length it changes into an open ulcer discharging foetid — There are some sores which resemble cancers in their symtoms and appearance, but are nevertheless different — These schirrus

should always be extirpated as nothing has been discovered able to discuss it— Their appearance on dissection differs according to the stage at which they have been extirpated; the centre is generally hard and dense like cartilage, from which white ligamentous fibres proceed to the circumference, which is not well defined; as the schirrus advances these are less evident, and when ulceration commences, it has quite a different appearance, having sometimes sysits in them— Whenever tumors exhibit this appearance after dissection, it is held as a general rule that they would have proceeded to cancers— We are not able however to tell what tumors will turn to cancers— Mr. Hunter confesses that he has often extirpated scrophulous tumors and left cancerous ones— Mr. Pearson says it is often impossible to distinguish— We should therefore be very cautious in forming our opinion on this subject— Authors differ much as to the return of cancers after having once been extirpated— Mr. Horn and North protest against the cancers being contagious— I think it best at first, by bleeding, leeching blistering &c. to try and discuss the tumor, and if these

sist to explain the case to the patient and advise
the operation — A disease attacks the Labia also pre-
puce and glans penis resembling cancer, but the ac-
contamenating tho' as it progretses to becomes a
corroding sore — Cancer is by some supposed to be con-
tagious, it is however not yet determined — They some-
times emit a contamenating vapour — Mr. Pearson says
virulence and contagion are different; the fluid may corrode but
the matter of the new sore is not like the old — Cancer has been thought
hereditary — Mr. Home proved it entirely local, tho' some peculiarities
may be predisposed to it — It is common to every age, but most in
advanced life — The period at which menstruation ceases, I think
is that at which it most frequently occurs; it occurs in almost
every part of the body, but mostly in the glands and breasts of
women — When operation is performed, it is important to perform
early, because after contamenation has gon on, success is then
doubtful — Messrs. Home & Klein say, that after the axillary gla-
nds are affected, we should not operate; my opinion is not so, for I
have sometimes performed the operation, in such cases, with success,
by passing a ligature round the glands, as will be explained
when we come to speak of Cancerous breasts — The Knife and
caustic have both been used, but I think the former better,

as you are there able to distinguish between the healthy and diseased parts, and operate accordingly - In some cases, however caustic is necessary, and then equal parts of white arsenic and sulphur is the best application - When we use the knife, and where the cancer is not ulcerated, a straight incision over the tumour is all that is necessary; but when it is necessary for the Surgeon to remove a portion of the Skin &c, two incisions are to be made - If the axillary glands are affected, make the incision long enough in the direction of the fibres of the pectoral muscle and dissect out first the mamma and then to the axillary membrane beyond the glands of the axilla to prevent hemmorhagy from them when retracted - When cancers cannot be removed, that is when there is no probable shadow of success from an operation, leaves of hemlock bruised, carrot poultice, and aqueous solutions of opium, tar water &c are the best external applications - The internal remedies must be opium and nightshade - Cancerous tumors are sometimes seated in the neck, and when deep seated, the extermination is attended with much danger - When cancers are seated on the face, they are called "noli me tangere" Some say it is a distinct disease, but I have always found them similar to other cancers -

The tongue is sometimes affected with Cancer; Mr. Hobme mentions two cases - The lip is sometimes subject to it; it commences with a small protuberance resembling a wart, which spreads over the whole lip - The removed two from the lip - Nor is the eye exempt from Schirrus it may be exterpated but it is a terrible operation - There have been many cases of cancer in the rectum, they are never cured; opium by the mouth and anus is the only palliation - The tunica vaginalis is sometimes affected and also the penis - It begins with a small wart on the frenum, prepuce or glans and remains quiescent for years, but if irritated, it ulcerates - The Urethra becomes exposed and has holes in it, Urine will tend to irritate it. The glands in the groins are sometimes cancerous, from which it is easy to distinguish venereal affections - The Ureters are often cancerous, and some authors advise their exterpation, but this I by no mens consent to; all that can be done is to avoid stimulating articles - Schirrus Testicles are common See Pott on this subject -

Cancerous Mamma

Before we begin to operate for the extirpation of Cancer from the Breast, it is extremely necessary to examine & determine the extent of the Tumour — We sometimes met with it as far as the Axilla, the clavicle, and the neck; it is therefore of importance to distinguish whether any of the Glands are hardened, which indicates the parts to be contaminated — When the disease, situated in the breast, has spread itself to the Axilla, neck or other surrounding parts, I am sorry to say that the operation does not always succeed; but when seated in the Mamma exclusively, failure is less frequent; it is then only necessary to make an incision down to the pectoralis Major and dissect away the tumour in the direction of the fibres of that Muscle — Much attention is to be paid to the hemorrhage from divided vessels: if small arteries are cut, an assistant should place his finger on them & the operator continue the dissection; if large vessels be divided, I always stop

the operation & secure them because if we do not take
them up until we have finished the dissection, lots of
blood may stop the blood for some time, and the vigi-
lance of the most skillful practitioner may be eluded
so that after the wound has been dressed and the patient
is quiet, a recurrence of the hemorrhagy takes place, dis-
turbs the patient and perplexes the Surgeon. Having
extirpated the Cancer & taken up the vessels, & sponged
away the blood &c, the edges are to be approximated
and kept so by adhesive plasters, taking care to have
a sufficient vacancy for the ligatures and the proofs
of suppuration; a compress is next to be applied and
a bandage carefully put on – There is no necessity
for cutting away any of the skin, if it be sound,
but should there be any hardness, or the colour
any way changed so that there is the least doubt
of its healthy state, such portions must be taken
off with the tumour, otherwise the operation will
undoubtedly prove of no effect – When the tumour
extends to the Axilla, we must cut off the brain,

and then make an incision from thence and carry it under the tumour on the breast, should the tumour adhere to any part of the Muscle it must be cut off without hesitation — It is always best to begin the dijection below, because the weight of the Mammary tumour, will pull down that, on those in the Axilla and bring them more into view — As soon as you have exposed the parts up to the Axilla, you can easily pull down the tumour when you thus have them in view, you would be tempted to cut them away immidiately, but this is extremely hazardous, for it frequently happens that one or more blood vessels are situated there, and the moment they are cut the devided vessels ~~are~~ retreat up in the axilla, and it becomes almost impossible to take them up; it is therefore necessary to tie a ligature firmly around the cellular substance, a little above the tumour, and then proceed to divide it — Celestie has been used

instead of the knife, but it has a present gone out of practice: with the knife we can cut as much as we judge necessary, which is not the case with the Caustic, and besides, the pain which patients experience from caustic applications, exceed that from the knife — If however, you are inclined to use Caustic, you will find equal parts of Arsenic & Sulphur, Sprinkled over the parts, to be the best application Corrosive Sublimate, and the actual Cautery have also been used —

Inflammation of the Globe of the Eye

This may be seated either in the anterior or posterior Chamber of the eye; it is attended with severe pain and great sensibility to light, generally accompanied with fever, the symptoms however vary much — When seated in the anterior chamber, suppuration frequently follows; an instance of which I know, from washing eye with urine during Gonorrhoea — In the posterior chamber

490, violent pain, high fever, and interrupted vision attend, the pupil continues of the same size — Sometimes the adnata is in some degree inflamed — In a case, I saw, the patient became delirious and died: Vision will in every instance be quickly destroyed, if no relief is afforded — Care must be taken to remove the exciting cause, and to avoid the remote causes; if any extraneous matter exists in the eye, it must be carefully removed, with a probe and a soft piece of linen; or an injection of milk and water — If these are ineffectual, invert the eyelid, and clear away any thing there present — Bleeding is the principal remedy in the inflammation of the eye and must be regulated according to the violence of the symptoms and fever — Cupping glasses to the cheeks are also good — Thirty or forty leeches around the eye, dividing the turgid vessels of the adnata with the shoulder of a lancet, syringes (of lukewarm) in

most cases the application of bread & cream with rose water sewed up in a piece of gauze and applied, are all good remedies. An infusion of the pith of Sassafras is a mild, ~~x x x x x~~ grateful and efficacious application — Blisters, after the inflammatory symptoms have subsided, round the eye, behind the ears, or back of the neck, and over the whole head are the best applications; but they are most serviceable when applied immediately over the eye; the flies of which the blister is made should be finely pulverized and well mixed with the ointment; a thin piece of gauze first put over the eye, and then the blister laid on —

The wash which I make use of is

℞. Sach: Sat: — v grs

Sulph: Zinci — iij grs

Laudanum — ℥ fs

Aquæ puræ — ℥ iiij M

a little to be dropped into the eye four or five times

a day — Astringent Collyria are, however, always injurious when used too early; Sometimes the foregoing formula is improved by adding ℥ij of Vinegar — Mercury has effected a cure after all other remedies have failed — When matter is formed, a continuance of the ~~antiphlogistic~~ Antiphlogistic remedies may produce absorption but if not, the Cornea must be opened which will prevent deformity, per opacity of that coat — If the disease be more deeply situated, the same remedies are necessary — A dark chamber, perfect rest, and vegitable diet must be strictly adhered to — To prevent a recurrence, an issue in the arm is recommended, or one in the back of the neck —

Unguis

This consists of a thickening of the conjunctiva at a particular part, which sometimes extends to the Cornea and destroys vision — The object of the Surgion is to dissect, this off with a paire of Scissors and a hook or tenaculum, commencing the dissection at the Cornea — Opacity of the cornea may be either partial or general — It sometimes dissappears but generally continues — The common remedies are Mercury internally, and Corrosive Sublimate 1gr to Aqua font ℥ IV externally; but these are seldom of any effect — When the opacity conceals the pupil only an artificial one must be made — After the remedies enumerated have all failed, I have known a cure effected by washing the eye frequently in nice water; this, however, must be used during the febrile stage —

Fistula Lachrymalis

This consists in an obstruction of the nasal duct, preventing the passage of tears into the nose, producing a swelling in the internal Canthus and a regurgitation of tears thro' the Puncta lachrymalia mixed with a thick matter secreted by the sac; a portion of the sacs is pressed into the nose — The pain is not very great, and the swelling subsides by pressure, which must be constantly exerted, and the closing of the sides must be prevented by some soft ointment. When inflammation occurs in the sac it should be emptied by pressure — In some cases, inflammation is excited by dust or cold, which affects the skin covering the sac, & stops up the puncta lachrymalia entirely the tears cannot escape, and pain & fever follow — Bleeding & purging and low diet sometimes solve this; if not, an

opening is to be made externally thro' which the contents escape and the swelling subsides the tears continuing to pass thro' the opening — When suppuration has taken place it is best to open the sac with a lancet, in the internal canthus of the eye, to prevent a scar on the cheek, & then pass a small probe down into it, to find the old passage into the nose — If this be kept open with a bougie, or what is still better Wares silver probe with a button at the upper end, which can be worn constantly — If the duct be impervious, an artificial opening is to be made thro' the os unguis — For this purpose Hunter invented an instrument like a punch, having also a smooth horn which must be introduced into the nostril to cut upon — In this case, no bougie will be required and the extended wound will readily heal — Should the os unguis be affected with caries of the bone, or fungous of the soft parts, such portions of the bone that is carious must be removed, and the fungous treated as in any other part — In performing the operation, the incision must be made a little below the tendon of the Orbicularis Oris muscle

, which would be otherwise injured; make the
incision your guide; first feel for the edge of
the orbit, and make the incision nearly in the direc-
tion of the edge of the orbit, in the inner angle,
you should cross the orbit when out of the angle
and convey the incision a little below towards the
cheek. Having cut into the sac, insert the blunt
up the nostril, and fixing the point of the punch
within the sac, push directly in towards the
nose - This operation should not be performed
if a probe can be passed thro' the nasal duct - After
the incision is made, a bougie or Wares probe
used for several months will effect a cure - The
incision need not extend over the edge of the
orbit when we use the probe only; but should
the probe not succeed, then the incision must
be enlarged for the operation - After the operation
is performed, no bougie or probe is necessary; but
the should be closed with adhesive plaster and
confined to bed - The tears will pass by the
new route, readily - It is necessary to ascertain

that the instrument is within the nasal process of the superior maxillary bone - Only the os unguis is to be cut in this operation - Some writers recommend an opening to be made with a Trochar thro' the os unguis, but Hunters instrument is much preferable; as the opening will be smaller and apt to close again -

Cataract

By Cataract is meant, an opacity of the Crystaline lens or its capsule, which by excluding the rays of light, occasions blindness - It appears in the form of a white or grey spot or speck behind the pupil; it comes on with the appearance of mist, threads or bars before the patients eyes - It commonly comes on without any pain, tho' sometimes pain and a sense of weight in the forehead, attend - But one eye is generally affected at first; afterwards, the other is almost always sooner or later, likewise affected - Adults are most frequently the subjects of this complaint tho' children are not entirely exempt, and there have been instances of congenital cataract; When occasioned by mechanical injury, bleeding, purging

belistening, mercury, low diet and dark chamber, have cured it – The common prescriptions are Mercury and electricity – Ware recommends Mercurial fuctions – Sometimes it disappears spontaniously – There are two operations for the cure of this disease; the first is Couching, by which the lens is pushed down to the bottom of the eye – The second is Extraction, in which an opening is made in the Cornea and lens or capsule or both extracted thro it – Both these operations are advocated by the most eminent surgeons, I prefer the Extraction, as it is more complete, for the lens is apt to rise (in Couching) and require a repitition of the operation – It is said that the crystaline lens is frequently absorbed; I can state that out of a great number of cases, I have never had the pleasure of seeing one single instance – Sometimes the lens is so loosely attached after depression, that whenever the person stoops, the lens falls before the pupil and renders the patient totally blind while

in that position 3rd When the Lens is fluid it will be impossible to depress it, and as the capsule is penetrated, a portion of fluid will mix with the aqueous humour, and obscure the anterior chambers, so that the surgeon must stop the operation on account of not being able to see the movements of the needle; besides, there would be great danger of his injuring the Iris, in attempting to complete it – It is true that in such cases, that part of the lens which is dissolved in the aqueous humour may be dessolved, but the portion left behind the capsule, still ~~obscures~~ obscures vision —

4th The capsule can never be depressed, but may easily be extracted in cases of opacity; consequently in opacity couching would be a useless operation; for altho' it is easy to tear the capsule in the middle with the needle, yet it is so firmly attached at its circumference, that it is impossible to disengage it, and the fragments, however frequently bent down by the point of the needle

will always fly upwards from their elasticity—

5th If the Capsule adheres to the Iris, it is impossible to seperate it with the Scratching needle, without tearing the Iris, cases of which I have seen, but in Extraction it is very easy to seperate the adhesion with the blunt needle— The objections to ~~extraction~~ Extraction are 1st The distortion and great irregularity of the pupil, occasioned by pressing the Lens thro' it; this however rarely occurs to any extent, and slight irregularities, tho' common do not impair vision— 2nd The opacity of the Cornea caused by the cicatrix of the incision— This (if the operation be done with a sharp knife and at one stroke) will be so inconsiderable that in many instances it will be impossible to distinguish the eye that has been operated on, unless there be a cataract in the other— 3rd The danger of evacuating the vitreous humour; if the surgeon takes the necessary precautions, he need not spill one drop; in some cases when the capsule must come out first, the escape of a small portion is unavoidable, but this I consider as rather a favourable accident, as the wound will heal better in

consequence and the patient enjoys better vision - 2dly
A portion of the Iris, it is said must be wounded, but nothing
is easier than to disengage the Iris when entangled
with the knife, by pressing the finger on the cornea and
rubbing it gently - These considerations induce me to pre-
-fer the operation of extraction always - Before the opera-
-tion it will be advisable to predict the issue with
some confidence as the patient will be solicitous to
know it: In these cases the Surgeon must always ground
his opinion on circumstances - If the eye be in good
health without any appearance of inflammation; if the
pupil contracts on exposure to light; if the patient
can distinguish light from darkness and if the cor-
-nea be perfectly transparent, a favourable issue may
be predicted - The best time for operating is in Spring
& Fall; the long confinement to bed is summer is irk-
some and in winter they are liable to take cold, which may
produce violent inflammation and suppuration
To be more certain of success, it will be proper to con-
fine the patient on low diet for a few days before the
operation, he is also to lose some blood and be purged
the day before - The instruments are 1st The knife of

502 Baron Wenzel which should have a blade 1½ inches
long and ¼ broad at the widest part, tapering
to a point; one edge should be blunt &c- The next is a
needle, but somewhat at the point to rupture the
capsule and at the same hande at the other end, a
small scoop to extract ~~transfer~~ fragments from behind
the pupil - The 3rd is a small ~~knife~~ forceps to take hold of the
Capsule when opake, they must be rounded at the
extremities on the outside, but flat inside, but not
in contact any where except at the point, if they
are close already, pressure will open the ~~—~~ points &
the hold on the Lens be lost in consequence - A circu-
-lar band should be passed around the head,
with a compress for each eye, which being pinned
up over the eye to be operated on, over which ano-
-ther soft compress and bandage is to go after
the operation - An assistant is to stand behind
, to support the patients head and keep the
upper eyelid turned up, that it may be out
of the Surgeons way; the Surgeon himself is to
keep the lower eyelid out of the way by pressing

down the tarsus with the fingers of the left hand
The eye after a while becomes steady, and then the
surgeon is to lay the point of the knife on the cornea
1/12 of an inch from the sclerotica, and not penetrate the
coat till the start of the patient is over; if he commence
the incision too soon, the start of the patient will
force out the aqueous humour — as soon as the
surprise is over, penetrate the coat, pass the knife
directly across, bringing the point out precisely oppo-
site the insertion on the other side; Make the
incision slowly and steadily, without ever
retracting in the least, else the aqueous humour
will escape and the Iris fall against the point
of the knife — If this should be the case, rub
the cornea gently with a finger of the other
hand, which will disentangle it and then
proceed directly across the other side; all pres-
sure by the surgeon and assistant is to be
taken off as soon as the point of the knife
comes out at the opposite side, as the knife

itself will keep the eye steady, while the surgeon draws the knife a little towards him but continues pushing it on "till it cuts itself out making a semilunar incision: Care should be taken to have the instrument at its widest part, wider than half the diameter of the Cornea; else there will be some difficulty in completing the incision. At the moment the section is completed, the patient shuts his eye and it should be suffered to remain so for a moment or two before the surgeon proceeds with the operation. the needle should then be introduced to puncture the capsule, which should be torn as much as possible with the needle and then the fragments will come out without the aid of forceps. Gentle pressure may now be made on the ball, so as to protrude the lens; if there be no specks remaining in the pupil after the discharge of the lens, and the patient can see well, then nothing more is necessary; but if specks still appear behind the pupil (as these are produced by the

opaque pragments of the capsule) they must be removed by the scoop & forceps – After the operation, the eye should be shut and covered with compresses and the bandages before mentioned – No speculum is to be used in this operation, as the surgeon cannot disintangle the Iris, should it become engaged with the instrument, & as the eye will become perfectly still & fix'd after a time, it is not necessary

Couching. For this operation it is necessary to have a round needle, flattened at the point; the point is to be inserted 1/10 of an inch behind the cornea, but in this operation the speculum must be used, as the needle must be kept sometimes a considerable time in the eye before depression can be made, and there is no danger of intangling the Iris, the point is to be brought behind the Iris and plunged into the lens or brought before as directed by Scarpa, and which I think preferable, and then the Lens must be depressed by bringing forward the handle and elivating it, which will loosen the point ——

Hernia

Hernia may defined the protrusion of any part which should be naturally contained within the cavity of the abdomen — When the descent is from the navel it is called Umbilical or Exomphalos, in the upper and fore part of the thigh Femoral, in the groin Bubonocele, a distinct process of peritoneum constitutes the sac in all except the Congenital, in which the Tunica Vaginalis mates the sac, as the intestine descends before the vaginalis is closed at the abdominal ring — The symptoms of Inguinal or Scrotal or Bubonocele are a swelling at the abdominal ring, extending along the spermatic chord down into the scrotum in males and Labia pudendi in females — The testacle is found at the bottom of the tumour; the parts may generally be easily returned at first; by lying on the back it will sometimes go up spontaneously, coughing and sneezing increase the tumour, which is not painful and will bear handling very well; the

circumstances of the tumour disappearing while lying on the back, ought to be attended to as it is characteristic of the complaint - The diseases from which it is sometimes with difficulty distinguished are Buboes, swelled testacle, Hydrocele, and Lumbar Abscess. also varicose state of the spermatic cord and cyst Buboes differ from Hernia 1st by being hard and painful to the touch; 2do In being generally preceded by chancre; 3tio By not changing its position on lying down and not being affected by cough and sneezing From the swelled testacle it may be designated by this disease having the swelling situated in the body of the testis or Scrotum, while in Hernia the swelling begins in the groin and travels down into the Scrotum - Also the swelled Testis is flattened on one side, Solid and heavy and not affected by a recumbent posture, & is generally preceded by Gonorrhoea Hydrocele begins in the Scrotum, but is a circular tumour, generally diaphenous, and manifesting a fluctuation of water on pressure, while the Spermatic cord is felt free between the tumour and

508 Abdominal ring - The Lumbago Abscess bears
the strongest resemblance when the matter points
on the upper part of the thigh, but fluctuation may
be felt from the belly to the tumour on the thigh
by placing the patient in a horizontal posture
and pressing on the belly, when the pluia will be
perceived in the thigh and vice versa - It is of
great consequence to make the distinction, for if
a rupture were taken for a Hydrocele and
wine injected into the sac, it might probably occasion
inflammation of the peritoneum, and the death
of the patient - Ruptures are very dangerous
from inflammation of the intestines & obstruction of
the alimentary canal which is caused by stricture
at the abdominal ring, or neck of the sac - As soon
therefore as discovered, it should be returned
and kept up by a truss, the patient in this way
can generally reduce it himself by laying on his
back, but if this be insufficient, the surgeon must
push it up with his fingers - Care should be
taken in the application of the truss, and for this

purpose, first feel for the abdominal ring, and having placed your fingers on it, fix the pad directly there which will be just above the pubis – If the pad be applied higher, no good will result from it, and if lower much pain and inflammation of the Testes will result by pressing the cord on the Pubis. The return of the intestine is sometimes prevented 1st By the quantity of intestine protruded; 2do By the protruded parts having lost their shape; and 3tio By adhesions either of the intestines to the sac, to each other, or both combined; 4th By the length of time which has elapsed since the protrusion took place – In this case the patient must be placed in a horizontal posture on a bed, with the foot of the bedstead elevated above the head so as to make an inclined plane; the hips should be higher than the head, and the thighs bent on the pelvis and approximated to each other – In this posture we may generally succeed – A purge should be administered daily, and an abstemious diet enjoined; by persevering in this plan for several days, I've succeeded in many instances; if however it be of long continuance and of such a

nature as to render its retention thro' the same orifice difficult, or that adhesions have formed to the sac, or among the contents, and when at the same time there are no urgent symptoms, it will be proper for the patient to wear a suspensory bag lined with some soft substance, by which the scrotum is to be kept suspended - Should the patient neglect to apply the Truss, or if he apply it carelessly, he will be in danger of stricture or strangulated Hernia - The Symptoms of this are increased hardness and size of the Tumour, which is now painful to the touch, and more so on coughing or standing up, sickness at stomach, Vomiting, costiveness, frequent, hard, contracted pulse, and fever - Relief must now be soon obtained, for if the stricture be considerable, the circulation in protruded part will be obstructed, or violent inflammation take place, which quickly ends in Mortification - In the first place lay the patient as already directed, then grasp the tumour in one hand, and with the finger

of the artery presses in a direction from the tuberosities above the superior anterior spinous process; by these means you may often succeed, but if not, bleed (in some cases) ad deliquium animi; should this all fail, a cathartic & glyster should next be administered — Jalap and Cream of Tartar combined with mint water make the best for this purpose, & should be given in divided doses to prevent vomitings — The warm bath may also be tried, and the operation of Taxis repeated in the bath — If all these fail, an injection of Tobacco in infusion ℥i to a pint of water, may be had recourse to — The smoke of Tobacco is also very good, given by way of injection — If these are ineffectual, a large dose of opium may be tried, either by mouth or in the form of glyster — Ice applied over the tumour and abdominal ring may also be tried; if ice cannot be procured, Aether may be evaporated over the part — If after all this, no relief be obtained, the symptoms remain stationary for several days, then the sickness abates much and pain in the tumour increase, with

tension and swelling of the belly — The fever runs high, great restlessness, hiccough, sinking pulse, and cold sweats succeed; After this the patient becomes easier; the tumour recedes spontaniously, and the bowels are moved, but death soon follows as these are symptoms of Mortification — Unfortunately there have been instances of recovery after the patient has been several days with the symptoms of Strangulated Hernia; which has made Surgeons doubtfull as to the time the operation should be performed; As a general rule, when ever a fair trial of the remedies mentioned has been made without effect, you should proceed to the operation immediately — The operation if performed early in the manner I shall direct is not attended with much danger; it is recommended, after dividing the skin and cellular substance, to pierce the sac and lay it open from bottom to top, before the abdominal ring is divided; by this method the cavity of the belly is exposed and peritonical inflammation is likely to ensue, which

will prove fatal on the third day — On this account I would advise the dividing of the tendon without opening the sac — 1st An incision is to ~~~~ be made in the direction of the fibres of the extended oblique muscle, beginning two inches above the ring and carrying it two inches upon the tumour — Seperate the cellula substance to find the abdominal ring, and when it is found there will be an obvious depression around it, which is caused by the structure; scratch a small hole (about an inch above the ring) across the fibres of the Tendon, insert a grooved director in this opening & push it downward until it comes out at the ring; the tendon must now be divided with the point of a scalpel (cutting upwards) from the ring in the groove — It has been objected to this operation that adhesion or an aeria fluid might exist in the tumour which would render it improper to return the contents in that situation; for the same reason we should never return the parts by Taxis without an operation as the same objection applies here — There is no case of Bubonocele in which this mode of operation is improper except in Gangrene, in which case the tumour must always be opened before the division of the tendon of the extenned oblique muscle — Sometimes it

happens that after the tendon has been divided in the manner before directed, the tumour will not always ascend; it, therefore, becomes necessary to open it by piercing the sac very cautiously and dilating it from bottom to top. - In case of Gangrene, when this is to be done, the stricture is first to be divided by passing the finger up to the sac and having insinuated it a little way within the stricture, it must be used as a director on which a blunt pointed Bistoury (covered with wax except at the point) is to be introduced and the stricture divided - On opening the sac, you will find adhesions of the bowels to the sides, to one another, or both, or the shape may be so altered as to be unable to pass back by the same orifice, or a stricture may be found at the neck -

The adhesions are to be separated with the fingers, and if these fail, the knife must be used - If the shape be much altered, the abdominal ring must be dilated, and if the Omentum be a principal cause of the change in shape a piece may be cut off - Should the divided vessels bleed they must be taken up by means of a ligature and brought close to the wound and kept so till the ligatures come away - It is not often that a stricture

is occasioned by the nuts of the sac: When this is the case, the fingers must be introduced a little way within the nuts of the sac, and a Bistouri passed over it to make the division of which be very small - When new there are symptoms of mortification an opening must be made into the sac; if the intestine be gangrenous, such portion of it must be cut off and the extremities sewed together by the interrupted suture - Gangrene of the omentum is to be treated in the same way - The older Surgeons used to tie a ligature round to cause the parts to slough but dreadful consequences have followed this treatment - The dead parts must be removed by a pair of scissors and if hemorrhage occurs, secure the bleeding vessels with ligatures and bring them out at the wound - The dressings necessary after the operation are adhesive plasters laid across the incision ex-ternally, except when the incision is carried to the scrotum - A soft pledget covered with cerate, with a compress and T bandage, complete the dressings - recollect that recovery from Mortification is rare

Femoral Hernia

Femoral Hernia is situated on the fore and upper part of the thigh - Females are most subject to it The protruded part descends in the aponeurotic expansion that envelopes the great vessels of the thigh Gimbernat & Hay, suppose that the structure is occasioned by a process of the aponeurotic expension called the femoral ligament, which is inverted into the Os Pubis under Poupart's ligament - The sac must always be opened in operating here, and must be done very cautiously as the sac is thin - After the opening is effected, you cannot go wrong if you consider the structure as a circle, on the upper part of which the spermatic cord & epigastric artery decussate each other; the spermatic cord laying internally, and the epigastric artery externally: posteriorly the great vessels of the thigh are to be avoided - Gimbernat divides the femoral arch next the pubis, which may be done with perfect safety - Monroe directs the incision

to be made in a line ~~from~~ towards the Umbilicus, ~~which~~ which will touch the junction of the cord and artery and therefore avoid both of them - I consider either of these modes perfectly safe, as but a very small incision is necessary to liberate the intestine - After having opened the sac, introduce a grooved director and pass up to the symphysis pubis, in which the scalpel is to be inserted & pushed directly upwards — — .. — — ..

Umbilical Hernia

In this the same means are necessary to prevent the descent & strangulation of the intestine - Morrisons Truss is best calculated for retaining it when replaced The same means are necessary to relax the stricture & part and if these fail, a similar operation is necessary, but this is rarely performed —.

Hydrocele

This disease is formed by a collation of water in the Scrotum; it is designated according to the different situations of the water: 1st in the cellular membrane when it is anasarcous, accompanying anasarca and

proceeding from a general affection (the cells of the Scrotum communicating with the cellular membrane of the system). 2no it is sometimes situated in the Tunica Vaginalis Testis and is continued in a cyst or cysts along the spermatic cord; these must be carefully distinguished from the diseases they resemble as they require very different treatment — The first is a symptom of general dropsy, and differs from Hydrocele in being a smooth and equal effusion covering both Testes so that they cannot be felt, or if they can are found to occupy the middle of the Scrotum in which is still perceptible — The skin retains somewhat of its rugosity, and the tumour has a doughy feel; the Spermatic cord may be felt of its natural size, and the skin of the penis is also more or less distended — When situated in the Tunica Vaginalis, it may be known by the swelling coming on gradually; tho it sometimes is suddenly produced by a rupture of the Lymphatics; the tumour commences at the bottom

and one side is generally soft at first, then somewhat tense – It is incapable of diminution, by pressure, and is larger below than above – The testacle if perceptible, is found at the bottom – Sometimes the tumour is diaphanous and affords a sensation of fluctuation – There is no difficulty in distinguishing this from Hernia, until it has attained considerable size; it may always however, be known by the tumour commencing at the bottom and proceeding upwards, which is the reverse with Hernia – In Hydrocele, too, the tumour is permanent, while in Hernia it will recede upon lying down and by pressure, lastly the spermatic chord may be felt very clearly in Hydrocele – ..

Schirrous Testicle

In this disease, the Testicle becomes hard, enlarged and flattened on one side, and much heavier than in its sound state – It is easely distinguished from Encysted Dropsy of the spermatic chord, the testicle here is always found at the back part, and disengaged inflammation, pain, and symptoms of Gonorrhœa

, distinguish it from Hernia Humoralis - Sometimes they are complicated and require the utmost attention to distinguish them - The 3rd Species is attended with one or more cysts of the spermatic chord; the testicle is found at the bottom - There is sometimes a fluctuation with diaphanous appearance; the swelling extends upwards to the ring, and in one case that I saw thro' the ring; Great care is here necessary to distinguish the disease, as I've known a Surgeon apply a Truss, supposing it to be Hernia - The manner in which the tumour came on, must be particularly attended to - The tumour does not remain stationary on pressure; I've seen one case in which it retired into the abdomen, as Hernia, but returned as soon as the pressure was removed without any alteration in size; it also moved in a mass and was not affected by pressure on the sides as in Hernia In the case mentioned a puncture was ma

and the water evacuated; the swelling immediately subsided —

Cure In the anasarcous species medical means must be used; but sometimes it is necessary it is necessary do draw off the water by puncture made with a lancet which is preferable to scarifications, which not unfrequently produce Mortification in debilitated habits — Four or six punctures in different parts are generally sufficient, and may be repeated if necessary — A piece of linen or lint is to be applied to absorb the water — Sometimes the effusion of water is the consequence of the rupture of the Tunica Vaginalis in true Hydrocele — I saw one case of this kind which was followed by a dark colour of the skin, which some surgeons have taken for impending Mortification The patient was very much alarmed, but I soon quieted his fears by informing him that the dark colour was occasioned by some blood discharged from a ruptured vessel of the Tunica Vaginalis, that the water would soon be absorbed from the scrotum and his old disease return all of which assurances were ultimately verified — Medical means are

commonly useless in Hydrocele, yet I've seen a recent case cured by pouring a stream of cold water on it every day from the spout of a coffee pot - Cases are related of cures by purges; Dr Shippen informs us of one which he cured by 30 grs of Calomel - In general the patient can procure so much ease from a suspensory bandage as be unwilling for any operation - When it is resolved to operate, it may be either palliative or radical - The 1st consists in making a puncture with a Trocar, lancet or cannula (which I think preferable) into the Tunica Vaginalis and evacuating the water, after which an adhesive plaster is to be applied and a suspensory bandage; always be careful to ascertain previously the situation of the Testicle, as its situation is not invariably the same - There are several operations advised for the radical cure of this disease; they all have same object in view viz: to effect adhesion between the Tunica Vaginalis & Testis, so as to obliterate the cavity, after the evacuation of the water - The first mode is by Caustic

which is apt to excite pain, great inflammation & mortification of the scrotum, with a suppurating sore for 5 or 6 weeks; the cicatrix formed by the caustic, is to be cut through by the Scalpel - The 2nd is the Seton; in this adhesion frequently takes place only along the sides of the Seton making a canal, while the rest of the Testis is uninflamed, and the cavity still remaining renders the patient liable to a second attack; nor can the situation of the testis be ascertained either in this or the other operation, independent of the tedious sore which the patient has to suffer - Mr Earle has revived the ancient practice of injecting stimulating liquids into the cavity except that he uses them weaker than the Old surgeons - The instruments requisite are, a Trocher or lancet and Cannula, a bladder containing some port wine, diluted with water with a brass pipe and stop cock, the bore of which should accurately fit the cannula - The Trochar is to be first introduced into the anterior inferior part of the tumour and the cannula inserted in the orifice very deep, to prevent the contraction of the Vaginalis; it is necessary to ascertain certainly that the cannula is

within the cavity, and to keep it so, else the fluid will be injected into the cellula membrane, and extensive sloughing be produced — After all the water has been evacuated, fix the pipe of the Bladder in the cannula and inject the mixture, which should remain 4 or 5 minutes, generally in that time the patient will complain of smart pain — Sometimes even Syncope will be produced, while at others little effect occurs — After the injection is let out, close the orifice with adhesive plaster — In two or three days, inflammation will commence & redness be perceived in the scrotum; if this ~~exists~~ proceed to any extent, bleeding, with a purge and poultice of bread and milk or Such: Sat: will be proper — After the operation the patient should be laid in bed with his knees close together to avoid derangement of the parts — In general a confinement of 2 or 3 days is sufficient, and then the patient may return to his ~~sick~~ business but too frequently this simple operation does not effect a radical cure, of which circumstance the patient should be informed before hand, in order that he may be prepared for another more certain; this

consists in laying open the Vaginalis from top to bottom
when the state of the testis will be known and if any
cysts exist – If the Testicle be schirrous, it should be extir-
-pated, and all cysts opened – The Tunica Vaginalis must
be kept away from the Testicle, while some soft sub-
stance is to be introduced into the cavity of the Vagi-
nalis to excite inflammation on its surface and ad-
hesion to the testis – If lint be used, care should
be taken not to leave any particle behind, which
would produce an abscess – I think Mr Hunters
mode far preferable to any other – He advises
a small incision thro' the Vaginalis and after
the water is evacuated and the testis is found to
be sound, pieces of dough are to be used; the incision
is to be an inch and an half long; two assistants
with hook are to hold back the lips of the wound
while the surgeon fills the cavity, but little pain
is felt; a pledgit of lint covered with some mollie-
ent ointment is to be laid over the wound and
secured by the T bandage – In four or five days
suppuration will commence and the dough
discharged with the matter – The parts now

beginning to contract squeeze out the doughby
degrees, while the surface of the Vagina is
gradually and equally applied to the Testis and a
complete adhesion takes place - No abscesses form
here, and a complete cure is obtained - Whenever
the operation of injecting wine fails, this should be resorted to

Fistulous Ano

By this is meant a deep cavernous ulcer, situated near
the anus with one or more opening to it, it is the consequence
of inflammation in the cellular membrane or adipose sub-
stance, which occasions and tenesmus, or bearing down
in women, when it terminates in suppuration. It is sometimes
attended with destruction of the substance, and then a
fistula is formed; this is complete or incomplete -
When it opens into the rectum only it is called a blind
fistula. To ascertain if it be complete or not a finger must
be introduced into the rectum at the same time that a
probe is passed into the sinus - Sometimes the inflam-
mation in the cellular substance is small resembling
a common boil, and will heal as such on being opened,

but sometimes the rectum is seperated from the belly a considerable way up, even to the pelvis, and then it is generally attended with carious Vertebroe — Inflammation attacks the adipose membrane also, producing abcesses; You must take care not to confound inflammatory tumours with piles — It would be most imprudent on every instance to require an examination, when a patient complains of a disease in these parts — In consequence of mistaking them for piles, suppuration takes plake, and the patient may not only suffer a tedious confinement but even death itself may occur — To prevent the formation of pus in these inflammations you must observe the depleting plan, bleeding, purging, leeches and poultices with lead water accordeing to circumstances; Strangury and retention of urene must be relieved by the warm bath, mild glysters and the gum-elastic catheter, if these fail — Should gangrene come on the usual remidies must be employed / When not called in time and a fluctuation of matter is perceived on examination, the swelling must be opened immediately and probably the abcess will heal as in other parts; but the fact is frequently otherwise, from the external opening

being small, which prevents the sides of the ulcer from coalescing and ulceration continuing, the sides become callous; 2ly from the frequent closing of the external opening, by which suppuration must be repeated in a few days— 3ly from the passage of air and feces into the sinuses and if occult a painful hard tumour is formed externally, 4ly from the sinus remaining alongside of the rectum, the pressure of which and adhesive inflammation, the sides become callous; the action of the Sphincter ani and the protrusion of the anus, also break the tender granulations that may have formed— 5ly When the sides become callous the surfaces cannot unite, 6ly General health may prevent the healing— The operation necessary for curing this disease consits in dividing the rectum as high up as the sinus extends, and thus exposing its cavity, by which a free escape to the matter will be afforded— The action of the Sphincter ani and the protrusion of the anus will be prevented; granulations now forming the surfaces adhere, and the contraction of the cicatrix will complete the cure— To perform the operation a bestouries covered with a sheath, is to be used, if the Fistula be occult, it should have a point to perforate the rectum, so as to make it complete—

A finger now being inserted into the rectum, the point of the Bistouri is to be presed against it, and the division made by pulling with the Bistouri and finger directly forward (Vide Pott.) — When the ulcer extends up the ~~rectum~~ rectum for some distance an opening is to be made thro the rectum at the top of the ulcer by means of a stilet contained in a canula, which is to be concealed within the canula until it reaches the summit of the ulcer, and is then to be pushed thro the rectum against a piece of wood about an inch in width and scooped at the upper end something like a tabespoon; the stillet is then to be withdrawn and a piece of lead wire introduced in the canula and passed thro the opening into the rectum — The piece of wood is then to be withdrawn and a pair of forceps or a piece of smooth iron with a hole in the upper end is to be passed up the rectum and over the wire which must be bent by drawing the iron or forceps down; the iron and canula are to be both entirely withdrawn, which will gradually cut its way out, while granulations will form behind producing the desired effect —

* This should only be used for when the Fistula opens

externally, & when the Operator, upon introducing his finger into the rectum, feels an artery pulsate at the place where the Bistourie should puncture the rectum -

Wounds of the Tongue

In wounds of the Tongue which sometimes occurs from biting the tongue or receiving a blow on the chin while the tongue is protruded, as it is difficult to get at it, the patient shutting his mouth from pain, it is necessary to to place a soft piece of wood between the teeth to prevent being bitten - The tongue, if necessary, may be drawn out with a hook, and the part united by sticking; adhesive plaster will not answer as soon becomes moist and loses its tenacity - The patient should be fed with spoon victuals they generally heal in about 6 days -

Wounds of the Ear

In wounds of the Ear a simple suture is sufficient -

Wounds of the Liver

If the right lobe be wounded the pain will be in the right shoulder, if the left, the left shoulder. The pain is of a dull heavy kind; if the wound be small it will in general do well; but if extensive a considerable hemorrhagy attends, and sometimes inflammation of the peritoneum is caused by the distension and accumulation of blood in the abdomen; in such cases little can be done; the patient should use evacuations and live on barley water; perfect quietness and rest are necessary.

Rupture of the Tendo Achilles

This happens in consequence of making some great effort in jumping, dancing &c. When it occurs the patient thinks he hears it snap like a cord. Doctr Monro ruptured his in going up stairs, and supposed his heel had sunk in the step. The patient is unable to raise himself on the floor; by examining you will feel the two ends of the tendon with a vacancy between them. A rupture of some of the fibers of the gastrocnemius

532 muscles sometimes happens, in which case the
fibers are torn off from their attachment to the tendon;
they happen in the same way as ruptures of the tendo
Achilles— The patient supposes that he has received a
smart blow on the leg and is sensible of something snap-
ping; he is unable to walk forwards but can slip
his foot sideways— At first there is very little pain, but
if proper care be not taken, in four days inflammation
and pain supervene, and frequently there is ecchymo-
sis— Sometimes by the patient keeping the leg still
for sometime he feels better, and thinks it to be getting
well, when by moving about the rupture again occurs
and the same train of symptoms follow— In this way
I've known a patient continue for 9 months, during
which time a great variety of things were tried, such
as embrocations, liniments, poultices &c— Monro's
Stocking & Splints with compression of the muscles
were used— The principal objection to Monro's lace stock-
ing is that it does not prevent the lateral motion of the
foot— I am in the habit of using a case exactly fitted to
the foot and covering one half of the leg, extending
from just below the Knee to the toes, which prevents

all lateral motion and keeps the foot extended -
In the application of this Splint, if, in the first place, if
the muscle is ruptured, apply a bandage from the
ham about halfway down the leg so as to make compression on
the muscle; & then apply the Splint and continue it down
some distance upon the foot - When this is done I have a
good opportunity of examining and dressing the wound;
after this I pass a bandage, beginning at the Knee & de-
scending to the heel - In all cases of divided Tendo
Achilles, it is a matter of great importance to keep the skin
skin from insinuating itself between the ends of the Tendon;
to do which adhesive plaster, or Sticks may be used - It
is necessary that the leg should be bent upon the thigh
to relax the muscles; it may be kept in this position
by passing a strap or band round the foot and carried
up and fastened to the drawers or pantaloons of the patient
the stitches should be made thro the skin only - It
is generally necessary to keep on the Splints and ban-
dages for 5 or 6 months -

Amputation

I told you when treating of wounds that when the parts were injured so that they could not recover, Amputation was necessary - If this is deferred until inflammation has supervened we must then wait until it has subsided - Amputation likewise becomes necessary in consequence of tumors or white swellings of the joints - Diseases of the joints often produce hectic fever, and the patient becomes debilitated by night sweats, loss of appitite, and then amputation is necessary to preserve life, if the patients appitite is good, we should not fear amputation tho the patient be much emaciated - The ancients advise amputation after mortification had taken place, and while it was still progressing this should always be avoided, because, if the limb be taken off in the progressive state of mortification the stump will be attacked and another operation rendered necessary - But if the Surgeon wait until the mortification be arrested and the dead parts sloughed away, the bone only will remain to be cut, which will give the patient but little pain - Another cause of amputation is large

Tumours, causing the absorption of the bone & joints.
Fungous Hæmatides is another cause - I shall now proceed to the operation - Sometimes we have to amputate a finger - If the disease is at or near the end of it, it will answer to take it off at or near the first joint, so that a portion of skin be left to cover the end of the bone - This being done the edges of the skin are to be brought in contact and kept to by means of adhesive plaster and secured by a roller which as the arteries are so small will be sufficient to restrain the hemorrhagy - Sometimes it is necessary to take it off at its articulation with the metacarpal bone; all that is then necessary is to cut down between the fingers until you come to the joint; after it is thus taken off and the vessels secured by ligatures, bring the edges together and apply strips of adhesive plaster. A roller is next to be passed around the hand - Sometimes it is necessary to take away the Metacarpal bone which may be done, either at it's articulation with the carpus or sawed off with a Metacarpal Saw; first seperating it from the other parts by making an incision directly over the middle of the bone, from between the fingers to the place where you intend to take it off [illegible]

Amputation of the Leg.

The things necessary in the performance of this operation are, a compress bandage, a tourniquet, a Straight Knife, a Scalpel, a catlin or knife with two cutting edges, warm water, Sponges, Tow, and two bandages of linen, a Retractor, a Saw, a pair of Nippers, a Tenaculum.

In proceeding to the operation, the patient is laid on a table with a blanket or fine mattress spread over it; the compress is first laid on the artery, and the tourniquet applied on it to stop the circulation. About an hour before the operation, the patient should take a dose of Laudanum not so much to ease pain as to give him fortitude, and fit him to undergo the operation. The tourniquet should be screwed until the circulation stops, and in order to ascertain when this is effected, I commonly lay my fingers on the anterior tibial artery while the assistant screws the tourniquet; in this way I can instantly tell when this is effected. When the injury is situated low down near the foot, the Surgeon has his choice where to operate. If your patient is in high-life, who wishes to preserve the appearance of two legs, and who can afford to get an artificial

leg, it will be best to operate as far below the Knee as possible; but on the contrary if it be a poor labouring man, who has to undergo hardships, he should have his leg amputated just below the Knee -

In proceeding to operate let an assistant first draw up the skin on the legs the Surgeon then takes the Straight knife and makes an incision round the leg thro' the Skin and cellular Substance - It is not necessary that this incision be made at one stroke as some Surgeons advise; The less a Surgeon place himself in such a position to make the incision all round at one stroke, that I was really afraid he would cut a piece of his nose off - Some Surgeons advise the incision to be made Straight downwards, but I would advise it to be made obliquely, so that the flap on the back part of the leg may come in contact with the Skin on the fore part, and thus completely cover the Stump - The integuments are now to be dissected from the muscle and turned back, after which the second incision is to be made down to the bone; this done with the Catlin, with divide the interosseous ligament and muscles, and pass the middle strip of the Retractor between the bone to draw back the soft parts -

538 Then saw off the bones - Some advise to hold the saw in such a position as to cut both bones ab once, but this is often inconvenient; I commonly saw the Fibula first and then the Tibia; it is always best to make long strokes with the saw - After the leg is cut off wash the surface with warm water, and search for the principal arteries, which must be drawn out with a Tenaculum and secured with a ligature; after this is performed the Tourniquet should be loosened to see if the bleeding exists much hemorrhage; warm water should be poured on the surface and the patient have wine & water to drink in order to excite the circulation - When ale are secured wash away all the clots of blood, examine if there be any Spicula of bone at the Sawed end, and if so cut them off with the Nippers - The integuments are now to be drawn down over the ends of the bones, and a bandage ~~wrapped~~ round the stump prevent the contraction of the muscles; the edges of the wound are to be secured by adhesive strips; before the adhesive strips are applied, the ligatures are to be brought out at the ~~edges~~ corners of the wounds; a piece of lint spread with cerate is to be applied between the edges to prevent their union by the first intention, for if the wnite before the

ligatures comeaway, the sinews will be confined
and a very painfull abcess will be formed - After
the adhesive plaster is applied, put on lint spread with
simple cerate, then a pledgit of tow, then comes the
in a conical form; all these are to be secured by a roller -
The tourniquet is to be left on the loosely applied so
that it may be instantly tightened should hemorrhage
come on - The patient is now to be put to bed and
his leg rested on a soft pillow -

Amputation of the Thigh

The instruments are nearly the same only the Cutler is
not wanted here, nor need the Retractor be slit in three
pieces but only in the middle - The operation is to be
made as low down as possible, so that we are above the
diseased parts; after making an incision thro the skin
all the cellular substance, dissect as in the other case) and di-
vide the muscles down to bone; after washing take up
the arteries and ligature the large vein - In old persons
the arteries are sometimes ossified, Then pass the needle
around some portion of the muscle, including them in the
ligatures, the latter to prevent hemorrhage - Tie the

540 other processes are similar to those I've already described in treating of amputation of the leg -

Aneurism

An Aneurism is a morbid dilitation of the heart or some part of the arterial system - Aneurisms are devided into true and false - The true are such as have been already described, and are attended with no wound or division of the cuties - The False are such as occur from accident, independent of any disease in the artery - I shall confine myself to the discription of the True aneurism - There is a greater tendency at one time to aneurism than at another; they may occur in the Aorta and different parts of the body at the same time, but are commonly confined to one part of the arterial system and which yeilding to the impetus of the blood, grows weaker and weaker and at last burst - The proximate cause of Aneurism is a disproportion of the momentum of the blood, and the power of the artery - Of the remote cause of aneurism we know but little. Excessive drinking of ardent Spirits is said to be one - It has been supposed, by some, that violent Strains lay a foundation for aneurism; I have twice seen aneurism occur in the ham from concussion; it has likewise been said that

Aneurisms are sometimes occasioned by bleeding in consequence of the lancet passing thro' the vein, and dividing or injuring the outer coats of the artery, leaving it too weak to resist the impetus of the blood - To ascertain this Mr. Hunter laid bare the carotid artery of a dog, he then dissected away the coats of the artery, one after another untile he came to the internal one; the wound was then closed and the dog let loose - About three weeks afterwards the dog was killed, the artery was examined and found to be of the natural size, not having dilated in any wise, and the coates had consolidated to the sides of the artery, and got entirely well - The circumstance which lays a foundation for an aneurism is a diseased state of the artery, by which it is rendered too weake to resist the force of the circulation - An aneurism is not simply a dilitation of an artery, but there is also a roughening of the internal coat which sometimes becomes ossified - It is said that an aneurism occurs much less frequently in women than in men; they occur most frequently in young persons - It is always of great importance to distinguish aneurism from tumours of any kind; tho' the difference is often obscure and not to be perceived in old aneurisms - In recent cases the pulsations can always be felt by pressure;

542 but after sometime when the swelling and tenseness of the aneurismal tumour is much increased, the pulsation becomes obstructed, because the stroke of the heart has to be confined to the finger thro' the coagula - In all recent cases we can remove the blood contained in the swelling by pressure made for some time on the part, tho' it will soon return after the pressure is taken off - On the other hand any other tumour remains immoveable. A tumour may form on an artery and so situated as to partake of its pulsation, and in that respect resembles aneurism; but we can place the finger behind so as to push it from the artery and then the pulsation ceases. Even when we are unable to raise the tumour from the artery we are still able to distinguish it from aneurism by the pulsation, for when a tumour is situated on an artery, we are sensible of its whole body moving when the dilatation takes place in the Thorax - This known by the palpitation of the heart and difficulty of breathing is to When the dilitation of an artery has commenced its progress is much slower than we would suppose, because the impetus of the blood as the artery dilates is devided over a larger surface - It does not advance at once, but progresses gradually, coagula forming as the sac distends - The

aneurismal sac or bag, as it enlarges, contracts adhesions to the parts around it, and the internal parts wear away to a great size - The dilitation of the artery generally takes place on that side of the which is most remote from the heart, or that on which the impetus of the blood acts most powerfully, tho' sometimes they are equaly dilated; the pressure they occasion often causes an absorption of the surrounding parts - I have seen a portion of the ribs absorbed from this cause - In this manner it goes on until at last it arrives at the skin, which being absorbed, the patient dies of a sudden gush of blood - In an Aneurismal Sac will be found a membranous coagula or lamina - The general indication of the treatment of common aneurism, is to lessen the quantity of blood in the trunks of the arteries; rest and low diet are also necessary; bandages have been applied - I shall chiefly speak of Popliteal aneurism - The surest method of cure is to take up the artery - The former mode of performing this operation was to make an incision into the aneurismal sac, while the tourniquet was screwed tight on the upper part of the thigh, and after discharging the blood, to tie up the artery just above the sac; this however is frequently unsafe, on account of the diseased state of the artery, which

544 would be likely to burst at the place where it was tied
In order to remedy this Mr Hunter proposes to tie the artery
about halfway between the Knee and the anterior ~~superior~~
Spinous procs of the ~~il~~ ilium, to avoid the hemorrhage
which often occurs from the diseased state of the artery which
would not allow the sides to unite - The limb will be
nourished by the anastamosing branches - It however
sometimes happens that these are not sufficient for
the nourishment of the limb, and consequently morti-
fication ensues - This I suppose, is not owing to the
any deficiency in the numbers or size of the anastamosing
branches - In proceeding to perform the operation, first have
a tourniquet fixed on the upper part of the thigh, but
not tight, not allowing the artery to pulsate; then make
the incision about four inches in length, longitudinally
in the course of the fibres down to the Sartorius muscle
and dissect along to the lower edge of it - It is necessary
to pay particular attention to this, for if you cut above the
Sartorius muscle you may cut down to the bone and
not find the artery - After you have cut thro' the skin
cellular membrane feel with your fingers for the artery
It is best to use the handle of the knife to expose the
as there are a great number of anastamosing branches

which would probably be wounded by the Sharp
nd of the Scalpel. There is a thin Facia before you come
to the artery, which you must Scratch with the point of your
knife a little to one side of the artery to avoid the danger of wounding
it. After the artery is brought into view, it may be taken
up either by passing one ligature around it, by means of
a Seton Needle, or as Mr. Abernethy advises, by passing
a couple round it half an inch distance from each other,
and then divide the artery between the ligatures, by which
means means the ligatures come away sooner. The artery
is divided to take off the tension; The ends recede
3/4 of an inch from each other when divided. In every way
in which the operation is performed the ends of the liga-
tures are to be brought out at the side of the wound,
and a pledget applied so as to press the of the wound close
together, that the external wound may not heal too soon &
thereby form an abcess. The seen an abcess from this cause
extend from the knee to the anterior Sacro-iliac Spinous
process of the Ileum. The aneurismal tumours, after this,
most commonly disappears, but it sometimes happens
that this is not the case and the tumour goes on to Sup-
puration. If the tumour, after it has Suppurated, does
not open of itself by the ulceration proces, it should be op-
ened by an incision, as when this is neglected, very serious
consequences sometimes ensue. I once knew an abcess of
the Knee joint produced by it, and which terminated in the

death of the patient - When the artery bursts and allows the blood to escape into the cellular texture, the pulsation may be perceived at first, but the blood stagnating soon coagulates and the swelling and tension prevents any pulsation being felt, and then it is almost impossible to say whether it be an abcess or an aneurism - In this case we should apply a tourniquet above the tumour and make a puncture into it; if it be an aneurism the artery must be tied up - When the tumour is large, part of the coagula should be scraped out at the puncture to relieve the tension - In eight or ten days the tumour will have suppurated and the extravasated blood have come away -

False Aneurism

These are two kinds, both occurring from wounds in the arteries - One occurs from bleeding in consequence of puncturing with a lancet thro' the vein into the cavity of the artery, and letting the blood flow from it into the vein; this form which is called Varicose Aneurism may be known by the thrilling sensation which is easily distinguished; a hissing noise may be heard by appl

ing the ear to the orifice - Sometimes the two orifices do not correspond with each other, and then the blood instead of flowing into the vein escapes into the cellular membrane, and forms a true aneurismal tumour communicating with the artery and vein, causing great pain to the patient and if an operation is not performed, the skin becomes tense and then bursts or sloughs away, bleeding profusely and throwing the patient into great danger - The Varicose Aneurism is free from danger, and therefore does not require an operation; the only inconvenience arising from it is a little deformity, caused by the dilitation of the vein at that place; but when the blood escapes into the cellular membrane, an operation becomes necessary; the Artery and vein should ~~both~~ be secured both above and below the orifice - Though ~~some~~ of the Varicose aneurisms do not require an operation yet some of their modifications do -

Strictures of the Urethra

Strictures of the Urethra, most commonly take place at the bulb; tho' they sometimes take place in the middle of the Urethra, and sometimes, tho' rarely, beyond the bulb at the membranous part - They are of two kinds viz. Spasmodic & permanent, which are not unfrequently combined - The first effect of a stricture in the Urethra is to lessen the flow of Urine; sometimes the patient does not suspect any disease until in voiding Urine he sends to pass drop by drop - He will now have frequent inclinations to make water, always passing a little at a time and with much pain and difficulty - The parts situated between the Stricture and bladder become very much distended, and the other parts distended, resembling, in its effects, a string tied round the penis - The Stricture most commonly runs regularly round the Urethra tho' not always; there is in passing the water considerable irritation, which causes a glet almost always to attend - Sometimes the Stricture is only in one side - Whenever Spasm supervene, or such a Stricture, the passage is completely closed -

Of Cures; these are old water, cold pap and the intern=

forate use of strong drink, and I had one patient
in whom it was caused by cistus; too long retention of
urine also caused it - The difficulty there is in ascertaing
the caused is the reason the suppression is not treated succ
essfully - Treatment. The permanent Stricture in
common may be ~~dilated~~ detated by a Bougie - Much depends on the
preparation of the Bougies and their make; In general
use waxed linen - Pieces of linen dipped into melted wax,
cut to a point and rolled in a proper form, make the best
Bougies - One of these may be introduced as far as it will
enter, and left sometime with its point in contact with the
Stricture, till the irritation has subsided and then pres
sed gently forward; by this means the Stricture will fre=
quently be overcome - Commonly when the Bougies is intro
duced, the patient will faint and a cold sweat break=
out over him; this seldom happens after the third in=
troduction - When the Stricture is small it be easily
dilated - We sometimes succeed by letting the patient
hold the Bougie down and press the point against the
Stricture for an hour or more every day - Sometimes the
canal is thrown on one side making the passage ir=
regular, and the pressure of urine accumulating on

550 the parts, causes ulceration of some of the parts
behind the Stricture, forming and artificial opening
called Fistula in Perineo - In such cases there are
two ways by which relief may be afforded; 1st caustic 2d
the lancet; the use of the caustic was first brigd by
Mr. Hunter and afterwards by Mr. Home - I have used
it Several instances with very good effect - The caustic
is rolled up in the end of the Bougie and tied fast by a
fine thread - The end of the caustic may project a little
to prevent from burning the canal before it reaches the
Stricture - When the Stricture is situated at the beginning
of the Urethra or before it, it may be divided by a lancet
defended by a Silver canula; the distention of the
Urethra behind the Stricture, makes it almost impossible
to divide any other but the Stricture - The lancet
may be pushed thro and divide it; but the circumstance
of the curvation of the Urethra makes it difficult to divide
it farther back; and here the curved canula answers very well in some cases - When the Stricture is
dilated, a Bougie or catheter should be introduced and
kept for several days; when, if there be a Fistula in
Perineo, it will heal up in a few days -

Spasmodic Strictures. Caustic should not be
used here - The warm bath or a little piece of
Tobacco on the end of a Bougie, introduced and kept
in contact with the Stricture, will frequently give
relief; or an anodyne Clister, V Section, Laudanum,
and Emetics, have frequently proved serviceable -

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for the cases of the Wounds
See Pat & Laceration

Rules for the application of Blisters —

1 Always precede the use of blister by V. S. and other direct depletion & remedies

2 The ordinary time for a blister to draw is 12 hours but on the head 24 hours even 36 sometimes — In children its time is regulated 8 or 12 hours even sufficient if longer gangrene & sloughing will occur most probably —

3 In Malignant Fevers never apply them on the ends of the extremities for they are apt to excite mortification —

In many persons are liable to Strangury in such cases let the blistered part be continued [illegible] which is produced at this time prevents the blisters [illegible] apply a large bread & milk poultice

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5 558

On the Diagnosis of Fractures near the Hip-Joint.

Thesis

for the

James P. Freeman

Student of Medicine

from the University of

Pennsylvania

Submitted

to Examination

by

the Author.

PHYSICK

LECTURE
NOTES BY
FREEMAN